PRINTING PRODUCTION

JULY
1961

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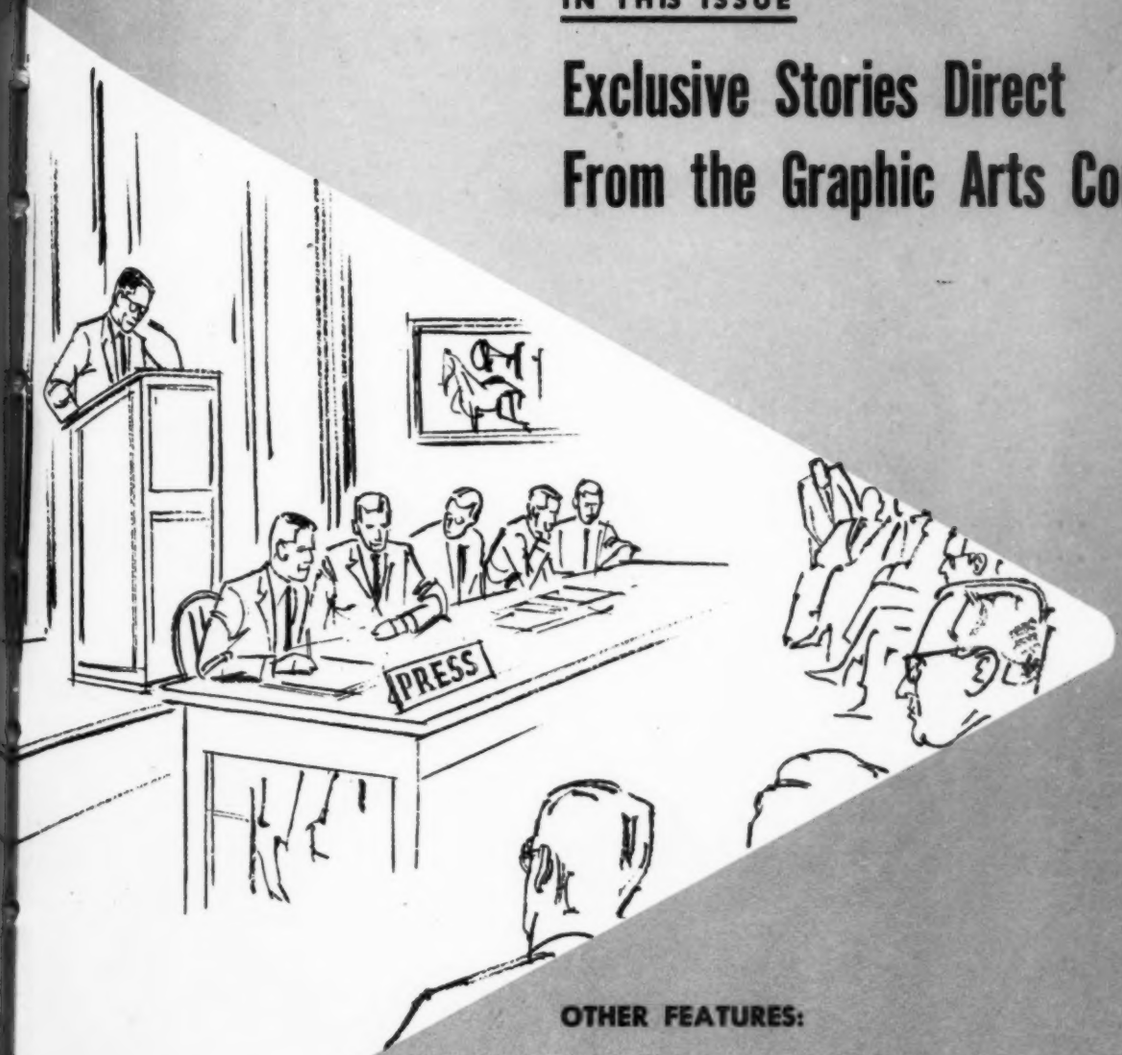
Exclusive Stories Direct From the Graphic Arts Conventions



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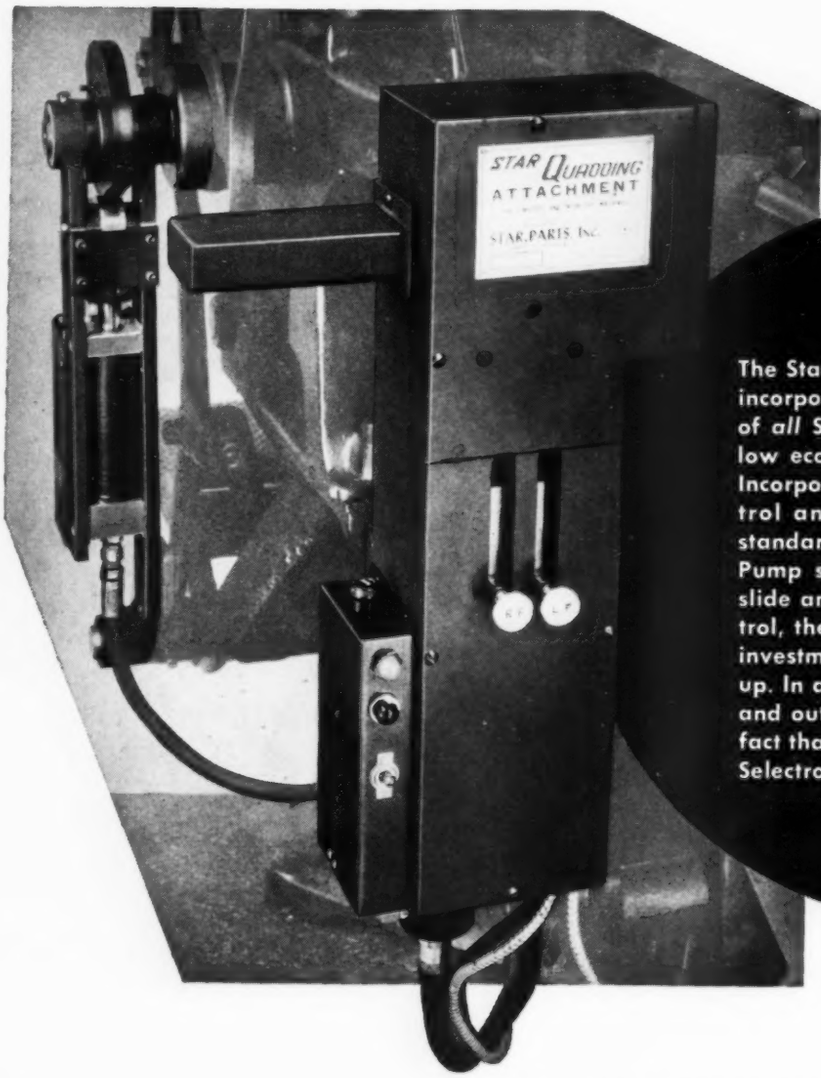

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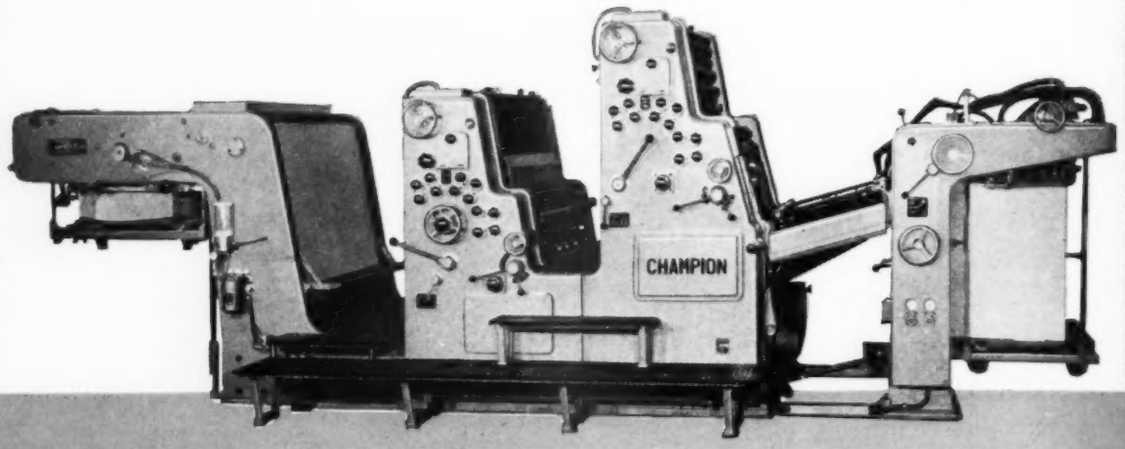

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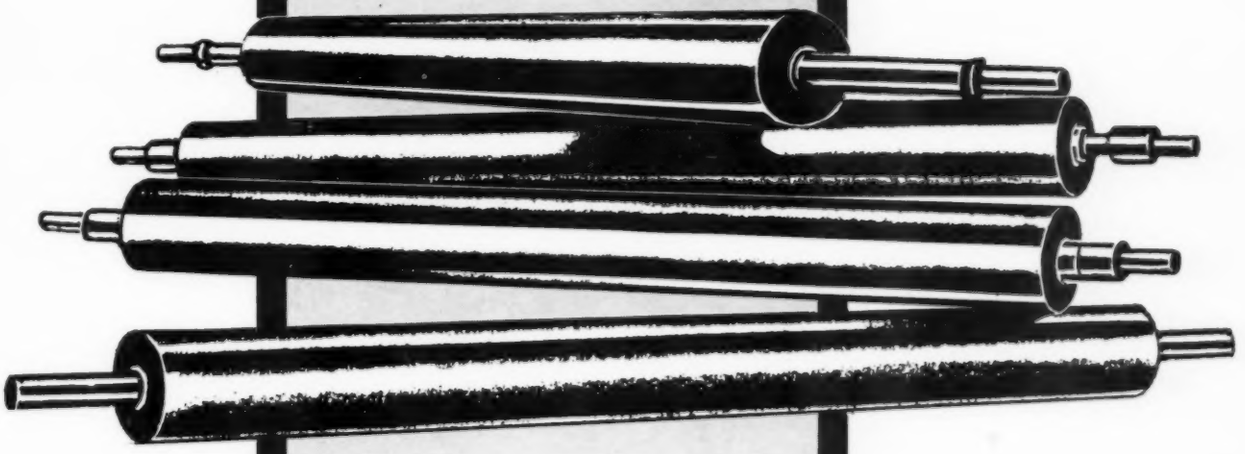

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PRINTING PRODUCTION *Magazine*

JULY 1961
VOL. 91, NO. 10

PRINTING PRODUCTION

Published especially for management, production and mechanical executives responsible for printing production and the specification of equipment and supplies used in all major processes of the Graphic Arts industry.

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PRINTING PRODUCTION is published monthly at 1276 West Third St., Cleveland 13, Ohio. © 1961 by Willsea Publishing Company.

Subscription rates in United States: One year, $5.00; two years, $8.00; three years, $10.00. Canada and U. S. Possessions: One year, $5.50; two years, $8.50; three years, $11.00. All other countries: One year, $10.00; two years, $16.00; three years, $20.00, in advance. Single current issues, 50c; back issues, 75c. December *Where To Buy* Printing Equipment and Supplies Reference Issue, $2.50 in United States; $3.50 outside United States. All foreign subscriptions payable in U. S. funds.

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THE COVER illustration is symbolic of the printing industry conventions held throughout the country, particularly during the spring and summer months. At these meetings, many men from all types of plants report how their production forces were oriented successfully in handling radically new types of equipment in order to enable their firms to realize the anticipated faster output at less cost. In these pages you will find exclusive reports about the 1961 conventions of the Technical Assn. of the Graphic Arts, Research and Engineering Council and the American Newspaper Publishers Assn. Research Institute.

LETTERS

TO THE EDITORS

Another Point of View

I am troubled by the following statement made in your report on electronic reading machines, page 44, May 1961 issue: "Some day, a machine may read typewritten pages and convert them into punched typesetting tape."

Why?

Several paragraphs of the article *Typesetting Takes Too Much Time*, PRINTING PRODUCTION, February 1961, are devoted to the argument that this is an inefficient and unnecessary use of complex character recognition equipment for a job that can be done much better and more economically with already available equipment. I am not so much concerned with the difference of opinion expressed in the two articles as I am with the fact that no one seems to have realized that two opposing views are being presented.

Frank DeWitt
Friden, Incorporated
Rochester, N.Y.

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JET LINE TABLES

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$695
28 x 32

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Top Students Receive Magazine Awards

EDITOR'S NOTE: Outstanding printing students have again been awarded four year subscriptions to PRINTING PRODUCTION. The award is presented annually to the top Graphic Arts graduating students in many high schools and college classes. This program of recognition has been sponsored by the magazine for more than a decade.

I most certainly appreciate the service your magazine is rendering to the printing students of today. For many years I have been subscribing to PRINTING PRODUCTION and have seen many students receive your four year subscription award. I recommend Lisle Caldwell as the young man whom I would like to see get the 1961 magazine award because of his outstanding scholastic record at the Institute.

Charles E. Kennedy, Dean
Southern Institute of Graphic Arts
Nashville, Tenn.

I wish to offer the name of Kenneth Killian as the recipient of the annual PRINTING PRODUCTION MAGAZINE award. May I express our appreciation to you for making such an award possible to a senior who will make his future in the Graphic Arts and who will gain much from your magazine.

Joseph J. Portle, Principal
Edwin G. Cooley, Voc. High School
Chicago, Ill.

Following is the name of the senior chosen to receive your annual magazine award: Joseph E. Buttermore. I am sure he will enjoy and benefit from reading your magazine.

Henry W. Dosey, Principal
Connelley Voc. High School
Pittsburgh, Pa.

. . . the recipient of this year's award is Bruce E. Anderson, who achieved the highest record in his class. I am sure he will enjoy every issue.

Vernon G. Eck, Head
Printing Production
Dunwoody Industrial Institute
Minneapolis, Minn.

. . . we are indebted to you for your generous offer to our top graduate. The boy who meets the award qualifications in this year's class is George Ryan.

Albert F. Hanrahan,
Coordinator
Boston Technical H. S.
Boston, Mass.

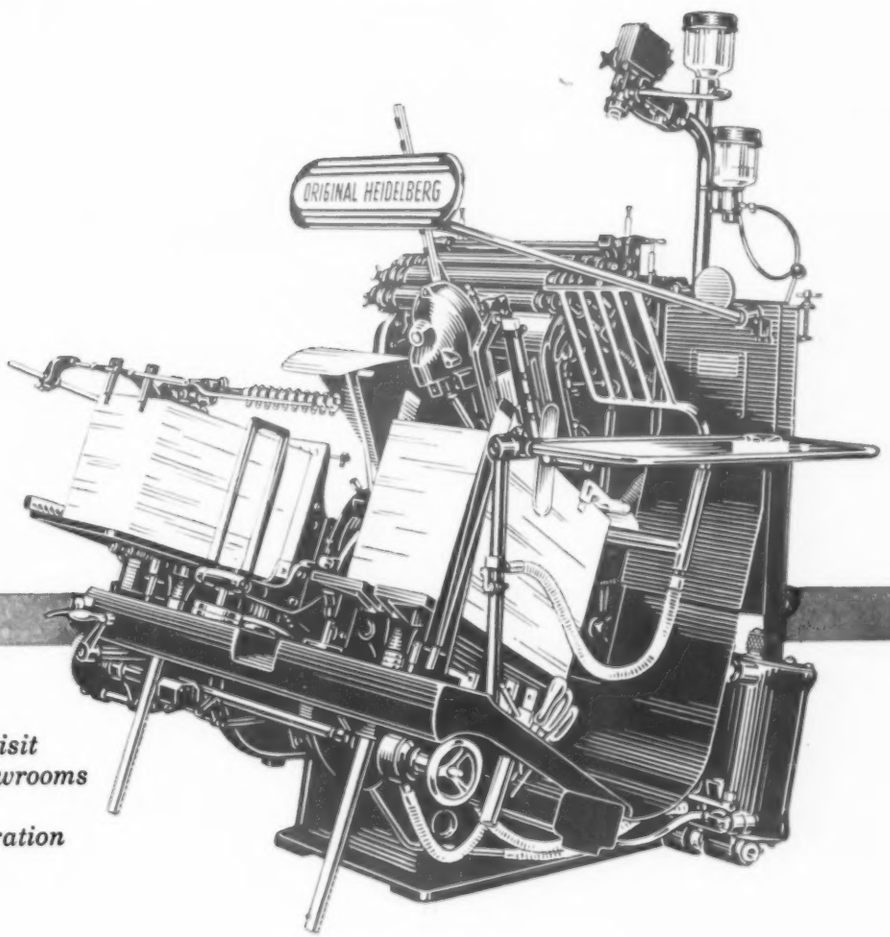
. . . our best possible candidate for your generous award is Harold D. McBrayer, who is just beginning his pro-

19 out of 20

automatic platen presses bought are

Original Heidelbergs

—because they're designed for profits



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fessional career with Reynolds & Reynolds Co., Dayton, O. I can assure you that each issue will be completely read, studied and greatly appreciated.

Wendell C. Silvius, Chairman
Dept. of Printing Management
West Virginia Institute of Tech.
Montgomery, W. Va.

Thanks from LTF

The Board of Directors of the Lithographic Technical Foundation passed a resolution at its annual meeting expressing appreciation to those who had made extra contributions of equipment, supplies and services to LTF last year.

On behalf of the Board of Directors and the LTF members, I convey to you our appreciation of your generous cooperation during 1960 in publicizing the Foundation activities. Over 80 companies contributed paper, ink, a wide variety of equipment and supplies, typesetting, printing and services. These contributions helped LTF render greater service to the industry than would have been possible otherwise.

Felton Colwell, President
Lithographic Technical Foundation
New York, N.Y.

In the Midwest, let Harry Vigal demonstrate the *Superiority* of *Burgess No-Pac Mats*

Harry Vigal (right) with Dewey Hawkins, Stereotype Superintendent of the Springfield (Mo.) Newspapers, Inc.

Harry, like all Burgess salesmen, knows stereotyping from A to Z. He can give you a lot of help (no charge, of course) with any mat problem. Let Harry show you the superiority of No-Pac Mats in your plant. You'll see why more and more papers are switching to Burgess for top results, top technical assistance and top service.

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FREEPORT, ILLINOIS

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Canadian Representative: R. M. Louson & Co., Ltd., 2575 Kennedy Road, Agincourt, Ontario

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NEWS ITEMS

LTF Names New Education Director – Anthony C. Genovese has been named education director of Lithographic Technical Foundation. Genovese has served as secretary of the Master Printers Section of the New York Employing Printers Assn. for the past eight years. He is succeeding Charles Shapiro who is joining Hopper Paper Co. in a technical capacity.

GENOVESE

VANAVER

Vanaver Joins Tobias Associates–Eugene L. Vanaver has joined Philip E. Tobias Associates, Glenside, Pa., where he will be responsible for new process development. He was formerly chief engineer of Edward Stern and Co., Philadelphia.

Polychrome Acquires Cellofilm–Polychrome Corporation has announced the recent acquisition of Cellofilm Industries, Inc., Wood-Ridge, N. J., as a wholly-owned subsidiary. The new company, which specializes in the chemical fabrication for bulk users of nitrocellulose compounds, will be known as Cellofilm Corporation.

Stouffer Joins McCall's–G. A. (Jerry) Stouffer has joined the McCall Corporation, Dayton, O., as manager of engineering. Formerly, Stouffer was director of manufacturing of Meridith Publishing Co., Des Moines, Ia., where he was employed for 30 years.

Minneapolis Paper Promotes Five – Five promotions in the production departments of the Minneapolis *Star* and *Tribune* have been announced by Jack McCambridge, production director. James N. Woodbury, Richard B. Cooney and Donald F. Wright have been named assistant production directors.

Woodbury, who has been chief production engineer since 1957, will be in charge of the composing, engraving and dispatch departments. Cooney,

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former pressroom superintendent, will head the press, stereotyping and newsprint departments, and Wright, mechanical engineer with the company since 1957, will direct production maintenance and staff engineering plus office and statistical matters.

Others promoted are A. J. (Pete) Lucier who has been named night production superintendent and Arthur R. Stone, pressroom superintendent.

Miehle Comptroller Dies—Thomas P. Carley, comptroller for Miehle Company, Div. of Miehle-Goss-Dexter, Inc., died suddenly of a heart attack on April 29 at the age of 57. Prior to joining Miehle nine years ago, Mr. Carley was a financial executive with Englander Mattress Co.

St. Louis Printing Firm Appointment—A. L. Powell has been appointed assistant production manager of Simmons-Woodward, Inc., St. Louis. An alumnus of the University of Wichita, Powell has formerly served as general manager of Palace Press, Inc., Tulsa, Okla., and as general manager of Cardinal Lithography Co., Los Angeles.

Two Promoted at Harris-Seybold—Kenneth J. Nolan and E. P. (Pat) Nalley have been promoted to the newly created posts of Eastern and Western

NOLAN

NALLEY

sales managers, respectively, by Harris-Seybold, Div. of Harris-Intertype Corp. Nolan served as New York district manager prior to his promotion and Nalley was the assistant general sales manager for Harris. Both will maintain headquarters in Cleveland.

Cocoros Rejoins Lawson—William Cocoros has rejoined Lawson Company, Div. of Miehle-Goss-Dexter, Inc., as Rochester, N.Y., territory manager. He will make his headquarters in MGD's Rochester office at 182 State St., covering West Virginia, Western Pennsylvania and New York State.

COCOROS

HUNDLEY

Named Darby Printing President—E. B. Hundley has been named president of Darby Printing Co., Washington, D. C. Former president, Otis H. Johnson, has been elected chairman of the board of the company. Other appointments announced by Darby include the naming of O. Edward Johnson as executive vice president; he formerly was in charge of manufacturing. Hundley has been associated with Darby for two years as vice president in charge of sales.

Comptometer Enters Business Forms Field—Comptometer Corporation, Chicago, will shortly acquire National Systems and Forms Co., Passaic, N.J. The acquired company will become the nucleus of the Eastern division of Comptometer Business Forms Div. David S. Chadwick, president, indicated there would be no changes in personnel or marketing policy.

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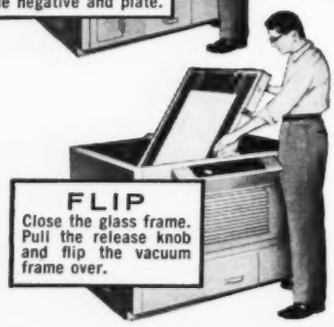
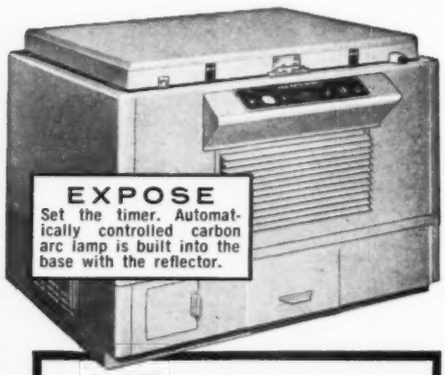
VACUUM FRAME ON TOP—
CARBON ARC LAMP
ENCLOSED IN BASE





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A patented nuArc feature eliminates all manual settings and adjustments. Once the timer is set for the desired exposure, the arc strikes itself and continues to burn until the time interval elapses. The powerful carbon arc assures short, efficient exposures — razor sharp line and half tone areas.
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subsidiary companies: Di-Noc Chemical Arts (Canada) Limited, 565 Davenport Road, Toronto, Ontario, Canada
Cramer Dry Plate & Film Company

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Peoria (Ill.) Paper Elevates Two – Frank A. Green, formerly production manager, has been named production

GREEN

WEAVER

and research manager of the Peoria (Ill.) *Journal Star*. Also announced by the newspaper is the appointment of Kenneth E. Weaver, former assistant production manager, as mechanical superintendent.

Gifford-Wood Appoints Agents – The appointment of two general sales agents for the conveyor division of Gifford-Wood Co., has been announced. Rapistan of Cleveland, Inc., will serve clients in Northern Ohio. General sales office of the company, under the management of R. E. Devries, is located at 1366 E. 45th St., Cleveland. George H. Anderson & Associates, 205 W. Wacker Drive, Chicago will serve customers in the Chicago, Springfield and Iowa City territory.

Champion Develops Regional Sales—A program for developing a regional sales organization has been initiated by Champion Paper & Fibre Co. In connection with the program, James S. Benton has been named assistant general sales manager; he was formerly head of converting sales division. The Eastern sales manager is Harry C. Lawless, Jr., who has headed the Philadelphia office since 1956. New district sales managers are: J. Benton McCall, III, who succeeds Lawless in Philadelphia; Robert E. Ervin, Jr., in New England; Walter Evans, Jr., in Dallas; and Clyde Craig, in the Washington-Baltimore office.

Sales representatives appointed by the company include: J. Ray Lincks, Miami; R. J. (Jack) Fisher and Robert E. Tiemeyer, Chicago; Ralph G. Brevik, Jr., St. Louis, and Glenn P. Remington, Philadelphia.

Elected To GAI Board – Dr. Wilbur Haverfield Cramblet, president of Christian Board of Publication of St. Louis, has been elected to the board of directors of Graphic Arts Industry, Inc., Minneapolis management consulting and industrial engineering organization.

R & P Moves Los Angeles Branch – Roberts & Porter, Inc., has moved its Los Angeles branch into a new building at 6681 E. 26th St. With approximately 15,000 sq. ft. of floor space, the new building has a cold room for storage of presensitized materials, a display room for Graphic Arts equipment and shipping facilities.

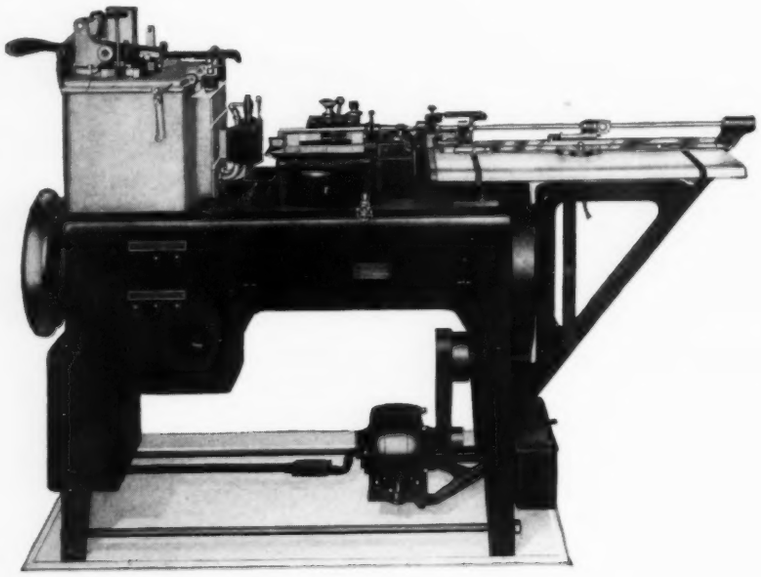
Named Hoe Southwest Representative —Raymond A. Breur has been appointed resident sales representative and Southwest sales engineer for R. Hoe & Co., Inc. Breur will have his headquarters at 3210 Dartmoor Dr., Dallas, and his territory will include five Southwestern states. He was formerly associated with Inland Newspaper Machinery Corp.

BREUR

BROOKES

Dewey and Almy Appoints General Manager—Charles E. Brookes has been appointed to a newly-created position as general manager of General Printing Products Dept., Dewey and Almy Chemical Div., W. R. Grace & Co. He was formerly assistant general manager of the firm's Polyfibron Division, Endura-Darex Dept.

National Gravure Cylinders Sold – Chambers-Storck Co., Inc., Norwich, Conn., has announced its purchase of National Gravure Cylinders, Inc., Long Island City, N. Y. Leon Chambers, president of the Norwich photoengraving firm, made the announcement.



Elrod Simplicity

Simple in design and mechanism, the Elrod produces an abundance of high-quality strip material from 1 point to 36 points in thickness. Elrod material is formed as a continuous strip of metal, cooled and solidified under pressure.

Simple in operation, Elrod mold changes are easily made, and the machine will produce strip material for all composing room requirements.

As there is no complicated mechanism to get out of order, Elrod users have found through years of experience that cost of operation and upkeep is very low. Put an Elrod to work in your plant and it will greatly simplify many of your composing room problems. Available in both gas and electric models.

Ludlow Typograph Company 2032 Clybourn Ave., Chicago 14

For More Information Circle 118 on Reader Service Card

SCOTT new, improved, IDEAL MAT ROLLING MACHINE

"Built Better for Better Mats!"

An outstanding value—low in cost, high in efficiency!

Rolls any type Matrix . . . molding cylinder *automatically* adjusts to any variation of form. Mats retain exact size of original form without stretching or distortion.

Newly designed push button controls, located front and back of machine, add to ease of operation. Aluminum guards, micrometer adjustments plus extra sturdy, rigid construction assure fast, accurate production.

Send for specifications and prices.

Size of Bed . . . 34" x 44", 6" thick, steel buffer plates at each end.

Height of Bed . . . 36".

Overall Sizes . . . 80¾" long over bed, width 61¼", height 59½".

Weight . . . 11,000 lbs.

3HP Reversible Motor, equipped with automatic brake.

Anti-friction bearings throughout.

Forms, loaded and unloaded, from either end or either side.

Finger-tip push button controls, located at each end of machine, include mushroom head "Stop" button, on and off light switch, forward and reverse start and stop.

Micrometer adjustment dials conveniently mounted on top of machine for easy, accurate reading.

SCOTT presses

WALTER SCOTT & CO. DIVISION OF WOOD NEWSPAPER MACHINERY CORPORATION Plant: Plainfield, N. J.
EXECUTIVE & SALES OFFICE: 501 FIFTH AVENUE, NEW YORK 17, NEW YORK

For More Information Circle 182 on Reader Service Card

Seel Named Veep at Harris-Seybold—Howard J. Seel has been promoted to the position of vice president, engineering by Harris-Seybold Co., Div. Harris-Intertype Corp. Formerly chief engineer for the company, Seel will have responsibility for engineering and development at the Cleveland and Dayton, O., plants.

SEEL

WALLIN

Represents Miller in West—Sherman K. Wallin has been appointed sales representative in a three state area by Miller Printing Machinery Co. He will cover Southern California, Arizona and New Mexico.

N.Y.C. Litho Firm Names President—Albert Merson has been appointed president of MacNaughton Lithograph Co., Inc., New York City.

Photon Election Results—R. M. Campbell has been elected vice president and Lisle Baker, Jr., a member of the board of directors, of Photon, Incorporated. Previously, Campbell had served as executive vice president of Lanston Industries, Inc. Baker is vice president and general manager of the Louisville *Courier-Journal* and *Times*, a past president of the Southern Newspaper Publishers Assn., and a past official of the American Newspaper Publishers Assn. Research Institute.

Earl Lacure Dies at 68—Earl P. Lacure, noted newspaper production engineer, died May 30 in Traverse City, Calif., after an illness of several months. He was 68 at the time of death and had been associated with the newspaper field for 53 years. Mr. Lacure served as a field engineer for Goss Printing Press Co. for many years, and was associated with the Brush-Moore newspaper group recently.

Goss Appoints Sales Representative—The appointment of John W. Randall as sales representative in the New York office of Goss Company, Div. of Miehle-Goss-Dexter, Inc. has been announced by C. S. Reilly, vice president, sales. Prior to his new assignment, Randall was a member of the firm's field department servicing and erected presses in the Eastern portion of the United States and Canada.

RANDALL

GREENFIELD

PIA Elects Rotary Business Forms Officers—Elected to head the Rotary Business Forms section of Printing Industry of America as president for the coming year is Arnold Greenfield, vice president and general manager of Watts Business Forms, Div. of Alfred Allen Watts Co., Inc., Clifton, N.J. Other newly elected officers include: Harold Salisbury, Nebraska Salesbook Co., Lincoln, Neb., vice president; Bob Walton, Walton Printing Corp., Whittier, Calif., secretary, and John Randall, Specialized Printed Forms, Inc., Caledonia, N.Y., treasurer.

Cumberland Elected Vice President—Frank J. Cumberland has been elected

HAMMOND

Gliders

FOUR MODELS OF HAMMOND GLIDERS FOR EVERY COMPOSING AND PLATE SAWING REQUIREMENT.

FLOOR GLIDERS

Model G-100 Glider is equipped for complete slug and plate sawing.

Model G-140 Plate Saw Glider is specifically a plate saw without clamping and mitering equipment and with a 140 pica gauge.

BENCH GLIDERS

Model BGR-78 Bench Glider has an elevating sawspindle for both slug and plate sawing.

Model BGS-78 Bench SlugSaw Glider has the saw spindle set at trimming position for slug and strip material sawing only.

GLIDERS GIVE FASTEST SAWING WITH ACCURACY - SAFETY - TROUBLE FREE PERFORMANCE!

Hammond Machinery Builders INC. / 1604 DOUGLAS AVENUE • KALAMAZOO, MICHIGAN

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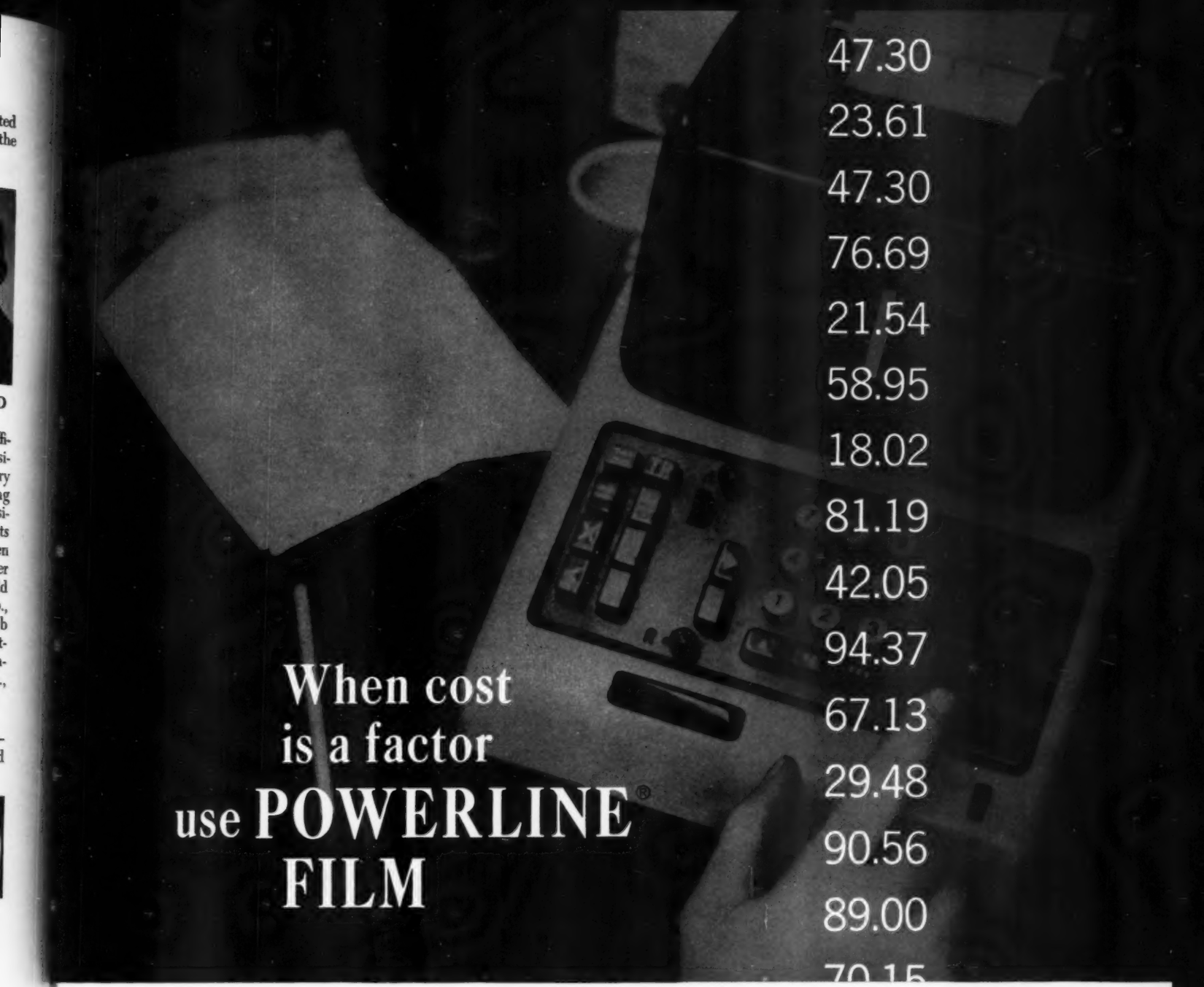


When cost is a factor use POWERLINE® FILM

There are two approaches to buying film: 1. Consider quality of image only. 2. Consider film cost as well as quality. If you subscribe to the first, then we recommend that you standardize on Chemco Type-X® film for halftones and Chemco Powerlith® film for line work. You can't do better. But if you want to save on supplies every inch of the way, then we say Chemco Powerline film is your best bet. The quality is good . . . better, we believe, than any other brand in its class . . . and it's priced to save you money.

WHAT POWERLINE FILM IS — Powerline film is made by Chemco in the same plant with the same equipment, quality control and inspection procedures as Chemco's Type-X and Powerlith films. It has a medium speed, high contrast emulsion with excellent density characteristics and produces a hard, crisp dot. Powerline film is primarily recommended for line work and works well on tough jobs such as typewriter copy. It also produces halftones with good tonal range. It is available on three bases: transparent paper for maximum economy, thin acetate for easy handling and stripping, and polystyrene for work requiring dimensional stability.

FOR MAXIMUM ECONOMY

swing over from sheet-fed camera operation to the more efficient Chemco roll film principle. You can save up to 30% on film costs and double your production. Ask us to prove these statements.

Prove to yourself that you can cut costs with Powerline film while keeping quality up. Ask us to demonstrate or write for samples stating which base is best for your operation.

chemco

CHEMCO PHOTOPRODUCTS COMPANY, INC.
Main Office and Plant — Glen Cove, New York

Atlanta Boston Chicago Cleveland Dallas Ft. Lauderdale Los Angeles New Orleans New York

West Coast Distributors: California Ink Co., Inc.; Smart Supply Co., Inc. Exclusive Canadian Distributor: W. E. Booth Co., Ltd.

For More Information Circle 39 on Reader Service Card

executive vice president of Detroit Gravure Corp. He formerly served as executive assistant to the president.

To Manage S&V Litho Sales – Frank Seymour has been named sales manager of the Litho Supply Div., Sinclair and Valentine Co., Div. American-Marietta Co. He has been associated with the company for 21 years.

Printing Executive Succumbs – Philip E. Minor, vice president, Baird-Ward Printing Co., Inc., Nashville, Tenn., passed away on May 4. Mr. Minor had been with Baird-Ward since 1927.

New Company in Richmond Area – The Cornett Screen Printing Co. has been organized to handle various types of screen printing in the Richmond area according to an announcement by Harry Cornett, president and treasurer of the new firm, located at 2536 N. Lombardy St.

I. Bendow Elected Star Parts Chairman–The directors of Star Parts, Inc., have accepted the resignation of Isaac Bendow as president and elected him chairman of the board. Although nominally retired, I. Bendow will remain as consultant and treasurer. His brother Emil Bendow, who has been vice president, was elevated to the presidency. Also announced by the company was the appointment of Carl Swenson as assistant secretary; Swenson is also the chief engineer for research and development. Frank Swenson remains as secretary and production manager.

I. BENDOW

JONES

Southworth Names Eastern Sales Manager–Southworth Machine Co. has appointed Donald P. Jones as Eastern sales manager. Jones will be responsible for sales, engineering service consultation and product development work for the company's three divisions.

Graphic Industries Acquires Gelb – Graphic Industries, Inc., Newark, N. J., has acquired the assets, and facilities of Joseph Gelb Co., of that city. In addition, Lacey-Luci Products, Inc., will be operated as a division of Graphic Industries, Inc.

West Coast Sales Representative–Fred Fisher has been selected as sales representative in Northern California, Washington and Oregon for Quido E. Herman & Co., Inc., Los Angeles, West Coast representatives for Star Parts, Inc. Fisher has served as head machinist with the San Francisco *Chronicle* since 1955.

FISHER

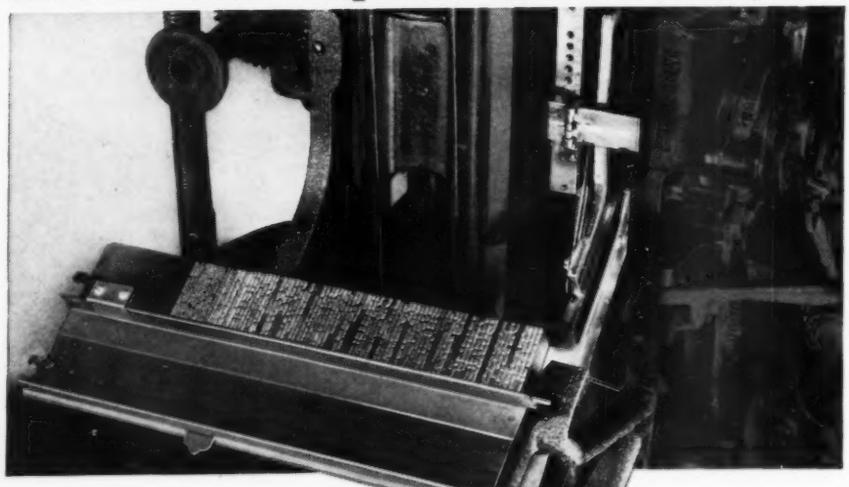
BORKOWSKI

NYEPA Appointment–Florian D. Borkowski has been named secretary of the Master Printers Assn., New York Employing Printers Assn. Borkowski was former executive director of the Mail Advertising Service Assn., Chicago. In his new post he will be responsible for the collective programs and activities of open shop firms belonging to NYEPA.

continued on page 20

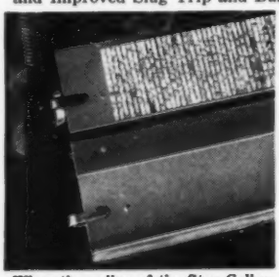
Modernize your Linotype...

with the STAR Improved Outside Galley Set

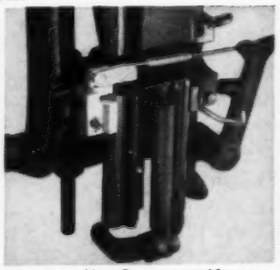


The Improved Star Outside Galley Set enables you to modernize your present Linotype by replacing the troublesome inside galley. The complete set (Star part No. M-65) consists of the 31° galley brackets, improved galley and galley slide, slug lever, Star Slug Jogger and Improved Slug Trip and Buffer.

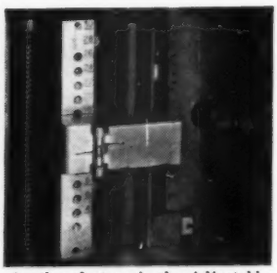
Precision TRADE ★ MARK Parts



When the galley of the Star Galley Set is full, the slide engages with a special hook which prevents it from falling to the floor.



The Star Slug Jogger provides positive slug stacking since it is actuated by the uniform rise of the first elevator slide. A spring acts as an over-throw safety to prevent machine damage should there be any interference in slug movement.



Another feature is the Adjustable Slug Trip and Buffer. A hinged gate, with leather buffer on the slug side, is adjustable vertically so that it can be set to trip any length slug. This assures smooth slug delivery to the galley. The hinge opens easily to clear jams.

Write today for literature on the Star Outside Galley Set. No obligation, of course.

Precision TRADE ★ MARK Parts

STAR PARTS, Inc.

SOUTH HACKENSACK, N. J.

BRANCH: 1327 BROADWAY, KANSAS CITY, MO. AGENCIES: CHICAGO • MINNEAPOLIS • LOS ANGELES • DENVER SO. ACTON, MASS. • STAR PARTS (LINECASTING) CANADA LTD. MONTREAL AND AGENTS OVERSEAS

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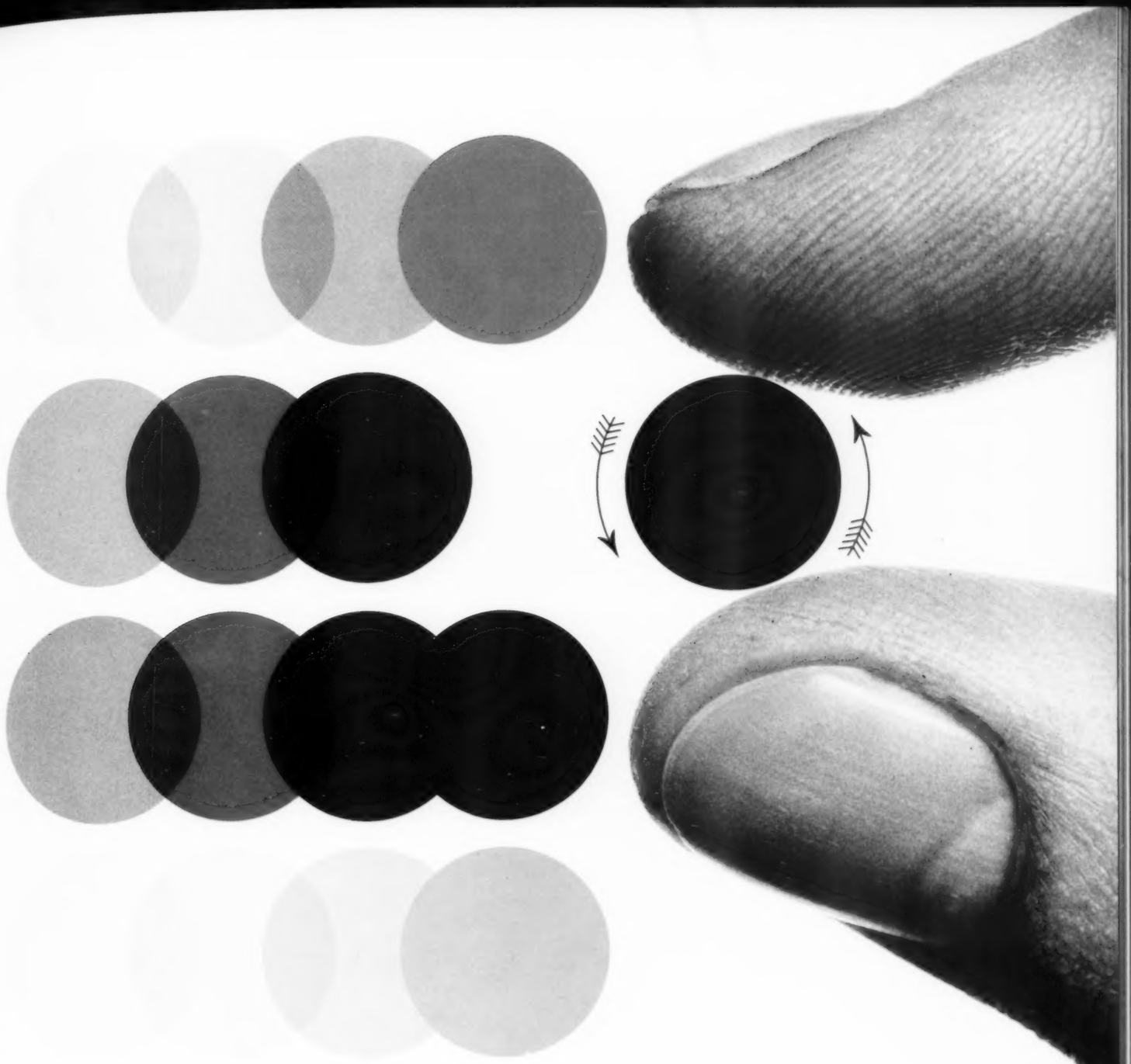

TOUCH CONTROL HIGH FIDELITY AT 70,000 PPH

Hoe bows to few, if any, in its appreciation of printing craftsmanship. Thus, Hoe seeks to aid the craftsman's chosen skill and simplify his task. And the Colormatic* is a press unit that makes printing a science as well as an art. One of many major Colormatic features is individual column Touch Control of inking. It is part of a unique ink motion system that insures maximum reproduction fidelity of black-and-white, ROP spot, and process color. The patented ink pump feature—offered only by R. Hoe & Co., Inc.—means that adjustment at any one speed insures equal reproduction quality at any other speeds. All this at 70,000 PPH, if your deadlines require it. Newspaper readership throughout the United States is at an all-time high, and so are the standards by which modern newspapers are printed. Hoe plays its part by building a bit of tomorrow into today's printing equipment. Look to Hoe for progress in printing. R. HOE & Co., Inc., 910 East 138th Street, New York 54, New York.

HOE

*TRADEMARK

ANOTHER QUALITY MAT FOR NEWSPAPER REPRODUCTION

JUST DEVELOPED BY CERTIFIED

BE OUR GUEST! TRY THE WONDERFUL NEW CERTIFIED PINK COMAT

ORDER A CASE OR A COMPLIMENTARY PACKAGE OF SAMPLES. ONE OF OUR REPRESENTATIVES WILL CALL AND HELP YOU GET OPTIMUM RESULTS FROM THE COMATS. STEREOTYPERS WHO TRY THEM ARE ENTHUSIASTIC OVER THE RESULTS.

TELEPHONE: MURRAY HILL 2-6112

CERTIFIED DRY MAT CORPORATION
555 Fifth Avenue · New York 17, N.Y.

For More Information Circle 36 on Reader Service Card

IT'S BOUND TO BE BETTER WITH A USS STEEL STRAPPING MACHINE.

"This machine saves us $2,000 a year"

"Our old strapping machine often cut magazine covers," says Mr. W. A. Akin, Vice President of Kalmbach Publishing Company, Milwaukee. "Orders were cancelled, circulation dropped, even the post office complained because the packages were unsafe and hard to open. So we switched to the new USS Model 12 Automatic Round Steel Strapping Machine. Our packages are safe and damage-free. Not only have complaints stopped, but we've saved $2,000 a year in labor costs and cut strapping costs by ⅔."

Kalmbach's completely automatic Model 12 uses 14- to 18½-gauge USS Round Steel Strapping. It binds about 24 packages per minute and handles various size packages without adjustment. It takes only 7½ sq. ft. of floor space and weighs only 1300 pounds.

Find out how the Model 12 can help your product cost less to handle, store, ship, and receive. See our new industrial film showing many possible applications for the Model 12. Send the coupon.

U. S. Steel Supply
Division of
United States Steel

USS
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U. S. Steel Supply
U. S. Steel Corporation
208 South LaSalle Street
Chicago 4, Illinois

Please send me more information on:

☐ The USS Model 12 Automatic Round Steel Strapping Machine
☐ The new industrial film entitled, "Tie This"

Name _____

Company _____

Address _____

City _____ Zone ____ State _____

For More Information Circle 205 on Reader Service Card

News Items

(CONTINUED FROM PAGE 16)

Elected Forbes Litho Vice President—Elected vice president in charge of manufacturing of Forbes Lithograph Mfg. Co., Boston, is Willard F. Greenwood. Associated with Forbes since 1936, Greenwood recently served as plant manager. He is a member of the research committee of the Lithographic Technical Foundation.

GREENWOOD

MALLOY

Malloy Joins Theo. Hommel, Inc. – John R. Malloy has joined Theo. Hommel, Inc., photo engineering firm of Berwyn, Pa., as chief engineer and production manager. He formerly was chief engineer for Unitronics, Inc.

To Direct Sales with Latin America – Following a five year association with Parsons and Whitmore, Inc., as sales manager for the Mexican market, John M. Rudolph has joined Paper Converting Machine Co. as sales engineer. His duties will include sales and sales promotion within all Latin American countries.

Mergenthaler Appoints Luster—Glenn A. Luster has been appointed production engineer with the Dallas agency of Mergenthaler Linotype Co. He will represent the firm in Arkansas, Southern Missouri and Northwestern Mississippi. Luster has been associated with various Arkansas newspapers, most recently serving as production superintendent at the Batesville (Ark.) *Guard-Weekly Record*.

To Manage C-H Sales in Buffalo—H. E. Johnson has been appointed district sales manager in Buffalo, N. Y., for Cutler-Hammer, Inc.

Miehle Appointments – William H. Lane has been appointed New England sales representative and Leo J. Roberts has been named comptroller of Miehle Company, Div. Miehle-Goss-Dexter, Inc. Lane, who will be stationed in Miehle's Boston office, previously was on the Miehle staff from 1954-1957. Prior to his present appointment, Roberts served the company as assistant comptroller.

LANE

HARRISON

Harrison Joins Anchor Chemical—Robert B. Harrison has been appointed regional sales manager of Anchor Chemical Co., Inc. From headquarters in Philadelphia, he will cover the territory of Pennsylvania, New Jersey and Delaware. He was formerly associated with Bingham Brothers Co.

Heads Production at St. Louis Firm—Joseph H. Horton has been appointed production manager of Simmons-Woodward, Inc., St. Louis. Horton has had more than 30 years of experience in the Graphic Arts and was formerly printing superintendent, Wrap & Wax Co., Minneapolis, Minn.

72" LAKE BALER

THE MODERN WAY TO BALE

- Requires no pit
- No installation expense
- Hydraulic - maintenance - free
- Produces "Mill Size Bales" 72" long x 42" high x 30" wide

Automatic baling at half the cost.

If a pneumatic conveying system or a conveyor belt system is used to deliver materials to the waste disposal area, electric and hydraulic controls are modified to automatically cycle the ram when the feeder-hopper fills with material. An automatic signal notifies the operator when the the finished bale has been formed.

SEND FOR **FREE**

DESCRIPTIVE BROCHURE

LE **LAKE ENGINEERING COMPANY**

312 Gostlin Street Hammond, Indiana

For More Information Circle 115 on Reader Service Card

"Daycollan® Rollers give us 50% more service—at lower overall cost..."

says Mr. Raymond E. Beckmeier
Letterpress Foreman
*Leading Midwestern Publishing House**

In one year of operation, our Daycollan Rollers have given us 50% more impressions than we ever obtained with any other type of press roller. What's more, previous rollers usually become grooved after about 10,000,000 impressions and would either be replaced with new rollers or reground. This meant expensive press down-time and the labor of two men to remove, grind and replace the rollers. By switching to Daycollan Rollers, we have eliminated all these expensive and time-consuming operations.

"No loss of tack" "Another point in their favor is the fact that Daycollan Rollers do not lose their tack. Our Daycollan Rollers have the same excellent tack properties today as they had a year ago.

"Easy to clean" "We are particularly pleased with another Daycollan feature . . . ease of cleaning. In our case, the Daycollan Rollers are given on-the-press wash-ups once every shift. Since Daycollans are non-porous, wash-ups take half the time—and less time means less expense.

"Far better ink coverage" "Finally, we have received far better ink coverage, with a more even lay of ink, than was ever possible with other types. And, since Daycollan Rollers do not swell or shrink, we have been spared the time-consuming job of constantly re-setting the rollers in the press."

*Name supplied on request.

©D.C. 1961

Dayco PRINTING PRODUCTS

Dayco

Dayton Industrial Products Co.
Melrose Park, Illinois — Division of Dayco Corporation

Western Distributors: George W. Shively Co., San Francisco; Farwest Ink Co., Seattle; Walter W. Lawrence Co., Inc., Los Angeles;

For More Information Circle 46 on Reader Service Card

MEETINGS for the PRINTING INDUSTRY

American Photoengravers Assn.—1961 Conv., Pittsburgh Hilton Hotel, Pittsburgh, Oct. 23-25. Exec. Secy. Frank J. Schreiber, 166 W. Van Buren St., Chicago 4.

ANPA-RI Production Management Conf.—1962 Conf., Queen Elizabeth, Montreal, Can., June 24-27. Mgr. William D. Rinehart, ANPA-RI Mechanical and Service Div., 750 Third Ave., New York 17.

Book Manufacturers' Institute — 1961 Annual Meeting, Boca Raton Hotel, Boca Raton, Fla., Oct. 17-20. Secy. Miss A. G. Watson, 25 W. 43rd St., New York 36.

Fifth District Craftsmen's Conf.—1962 Conf., Claypool Hotel, Indianapolis, May 11-12. Pres. Elim H. Smith, Gospel Trumpet Co., Anderson, Indiana.

Flexographic Technical Assn. — 1962 Meeting, Palmer House, Chicago (date to be announced). Exec. Secy. Julian Ross, 220 W. 42nd St., New York 36.

Graphic Arts Assn. Executives—1961 Fall Meeting, Hilton Hotel, Pittsburgh, Oct. 6-7. Secy-Treas. Doris Hall, 321 Tower Bldg., Washington 5, D. C.

Gravure Technical Assn.—Exec. Secy. Edward S. St. John, Room 4800, 30 Rockefeller Plaza, New York 20.

Great Lakes Newspaper Mechanical Conf.—1962 Conf., Claypool Hotel, Indianapolis, Jan. 14-16. Secy. John E. Innis, R. R. No. 1, Box 546, Indianapolis 27, Ind.

Illinois Newspaper Mechanical Conf.—1961 Conf., Sheraton Towers, Chicago, Sept. 23-24. Secy.-Treas. Arthur Kramer, Joliet (Ill.) *Herald-News*.

Intl. Assn. of Electrotypers & Stereotypers, Inc.—1961 Conv., Shoreham Hotel, Washington, D.C., Oct. 2-5. Exec. Secy. Floyd C. Larson, 758 Leader Bldg., Cleveland 14.

Intl. Assn. of Printing House Craftsmen—1961 Conv., Palmer House, Chicago, Aug. 6-9. Exec. Secy. Pearl E. Oldt, 411 Oak St., Cincinnati 19.

Intl. Graphic Arts Education Assn.—1961 Conf., Ferris Institute, Big Rapids, Mich., Aug. 13-18. Exec. Secy. Samuel M. Burt, 1411 K St., N.W., Washington 5, D. C.

Intl. Printers Supply Salesmen's Guild—1961 Meeting, Palmer House, Chicago, Aug. 6-9. Secy. Harry Deck, 75 E. Wacker Dr., Chicago 1.

Intl. Typographic Composition Assn.—1961 Conv., The Queen Elizabeth, Montreal, Can., Oct. 4-7. Exec. Secy. McKinley M. Luther, Washington Bldg., 15th St. and New York Ave., N.W., Washington 5, D. C.

Iowa Newspaper Mechanical Conf.—Secy.-Treas. Paul F. Kamler, Mechanical Supt., Clinton (Ia.) *Herald*.

Lithographers and Printers National Assn. — 1962 Conv., Homestead, Hot Springs, Va., Mar. 31-Apr. 6. Dir. Oscar Whitehouse, 1025 Connecticut Ave., N.W., Washington 6, D. C.

Mid-America Newspaper Mechanical Conf.—1961 Conf., Hotel Muehlebach, Kansas City, Mo., Sept. 8-10. Secy. Cliff Waters, Kansas City (Mo.) *Star*.

INSTALLATION OF 3 TRI-Q TOASTERS AT THE

Los Angeles Times

Converting to PACKLESS mats? The TRI-Q TOASTER mat pre-dryer is a "must" in your stereotype department for an efficient PACKLESS mat operation! It saves up to 50% forming time . . . eliminates warps and buckles . . . improves halftones and ROP Color quality . . . lets you shrink 7/8 of an inch and more! Sold on a 15 DAY FREE TRIAL OFFER . . . backed by a RESULTS GUARANTEED-OR-MONEY-REFUNDED policy!

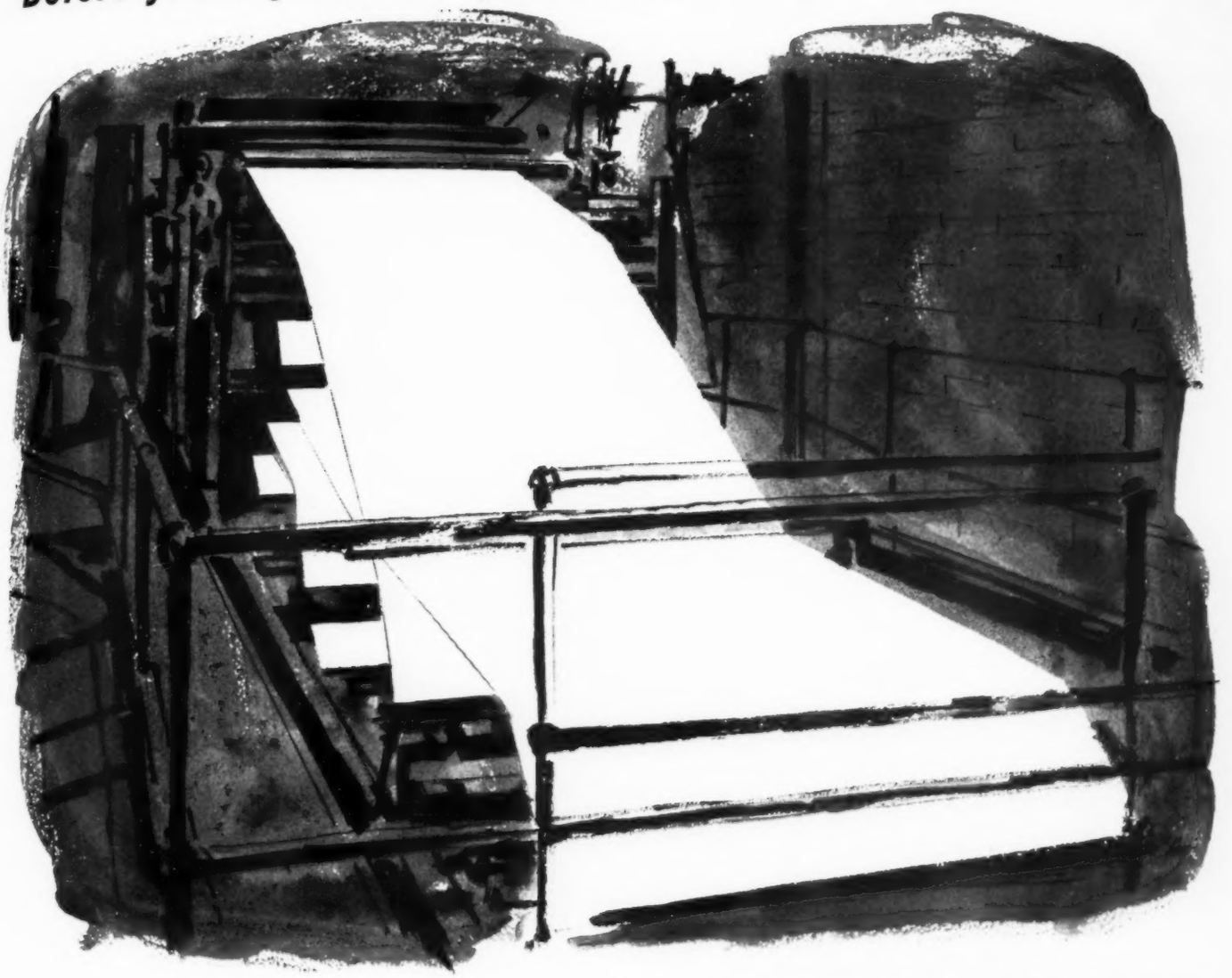
NEW TRI-Q FORMER

Totally new automatic mat former of advanced design! Enables you to use up to 12 inches of vacuum for PACKLESS MATS . . . dry and form mats FASTER . . . reduce costs . . . beat late starts.
The TRI-Q FORMER is now available to the industry at a surprisingly moderate price.

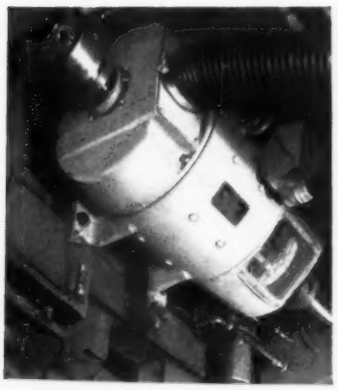
TRI-Q, INC.
1922 PENN MAR AVE. EL MONTE, CALIFORNIA
GILBERT 3-1514
WRITE FOR BROCHURE

For More Information Circle 199 on Reader Service Card

Before you buy a drive system . . .



Let's Talk Press Drive FLEXIBILITY



G-E KINAMATIC® d-c motors mounted at each *San Francisco Chronicle* press unit provide all the power you need, whenever you call for it.

COMPACT CONTROL ROOM at the *Philadelphia Bulletin* contains all the G-E control, rectifier, and power-distribution equipment for 72 press units and 14 folders.

Flexibility is one of your most important requirements. As a newspaper production manager, you must have complete freedom concerning which units are operated with which folders. Such flexibility enables you to quickly and efficiently set up and produce a paper, regardless of size fluctuations between editions.

YOUR GENERAL ELECTRIC DC DRIVE SYSTEM takes such orders in stride. The G-E system enables you to "transfer" drives from press to press whenever your requirements change—or whenever press trouble develops. You simply throw a switch for each unit or folder involved. This switch connects everything associated with the drives—motors, dynamic braking, push buttons, press accessories, press lights—even the reel-tension and paster equipments, if you like.

BUILT-IN CAPABILITIES FOR EXPANSION add to the flexibility of your G-E drive system. As your presses grow in size, it is easy and inexpensive to add drive capacity. All you need is a motor, a selector switch, and accessories for each new unit. No costly, additional control-room equipment is required.

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For More Information Circle 72 on Reader Service Card

Mid-Atlantic Newspaper Mechanical Conf.—1962 Conf., Hotel Shelburne, Atlantic City, N. J., Mar. 29-31. Gen. Mgr. G. Richard Dew, 2717 N. Front St., Harrisburg, Pa.

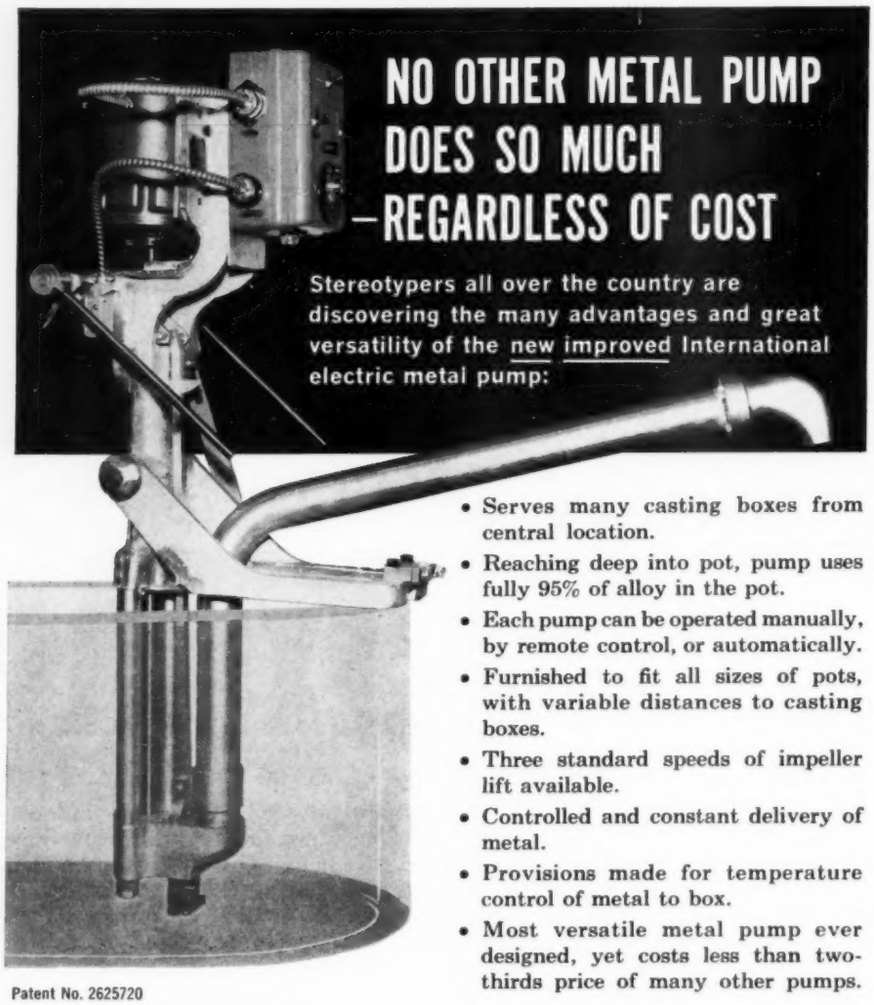
National Assn. of Litho Clubs – 1962 Conv., Deauville Hotel, Miami Beach, May 31-June 2. Mgr. Robert Mayer, 330 S. Wells St., Chicago 6.

National Assn. of Photo-Lithographers —1961 Conv., Hotel Commodore, New York, Sept. 27-30. Exec. Vice Pres. William J. Stevens, Herald Tribune Bldg., 230 W. 41st St., New York 36.

National Paper Trade Assn. – 1961 Conf., Conrad Hilton Hotel, Chicago, Oct. 22-25. Exec. Secy. O. Glenn Leach, 220 E. 42nd St., New York 17.

National Printing Equipment Assn., Inc.—1961 Meeting, Pittsburgh Hilton Hotel, Pittsburgh, Oct. 10-11. Exec. Secy. William G. O'Donnell, Room 914, 509 Madison Ave., New York 22.

National Safety Council Printing and Publishing Section—Staff Rep. Harry C. Johnson, National Safety Council, 425 N. Michigan Ave., Chicago 11.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New England Daily Newspaper Composing Room Executives Assn.—Exec. Secy. Lewis R. Greene, Westerly (R.I.) *Sun.*

New England Newspaper Mechanical Conf.—1961 Conf., Hotel Statler Hilton. Boston, Oct. 21-22. Secy.-Treas. Walter C. Crighton, New London (Conn.) *Day.*

North Carolina Press Assn. Mechanical Conf.—Miss Peggy Chears, P. O. Box 5125, Raleigh, N. C.

Northwest Newspaper Mechanical Conf.—Secy. Treas. Ralph N. Carson, Dunwoody Industrial Institute, 818 Wayzata Blvd., Minneapolis 3, Minn.

Pacific Newspaper Mechanical Conf.—1961 Conf., Jack Tar Hotel, San Francisco, Sept. 8-10. Secy. Edward J. Maggi, Phillips & Van Orden Co., Fourth & Berry Sts., San Francisco.

Packaging Institute Assn.—1961 Meeting, Biltmore Hotel, New York, Oct. 18-22. Exec. Dir. Chas. A. Feld, 342 Madison Ave., New York 17.

Printing Industry of America – 1961 Conv., Statler Hilton Hotel, Pittsburgh, Oct. 9-14. Gen. Mgr. Bernard Taymans, 5728 Connecticut Ave., N. W., Washington 15, D. C.

Research and Engineering Council – 1962 Conf., Hotel Park-Sheraton, Washington, D. C., June 4-6. Managing Dir. Robert E. Rossell, 1411 K St., N. W., Washington 5, D. C.

Rocky Mountain Newspaper Mech. Conf.—1961 Conf., Brown Palace Hotel, Denver, Oct. 27-29. Pres. Gil Bailey, Scottsbluff (Neb.) *Star-Herald.*

SNPA (Eastern Div.) Mechanical Conf. —1961 Conf., Hotel Dinkler-Plaza, Atlanta, Aug. 6-8. Secy. James B. Brotbeck, P. O. Box 1569, Chattanooga 1, Tenn.

SNPA (Western Div.) Mechanical Conf. – 1962 Conf., Oklahoma City, Mar. 4-6. Secy. Claude V. Capers, P. O. Box 1569, Chattanooga 1, Tenn.

Southern Graphic Arts Assn. – 1962 Conf., Buena Vista Beach Hotel and Motel, Biloxi, Miss., May 6-9. Secy. Charles E. Kennedy, P. O. Box 1187, Nashville 2, Tenn.

Technical Assn. of the Graphic Arts– 1962 Conv., Hotel Radisson, Minneapolis, Exec. Secy. Earl Sundeen, P. O. Box 3064, Federal Station, Rochester 4, N. Y.

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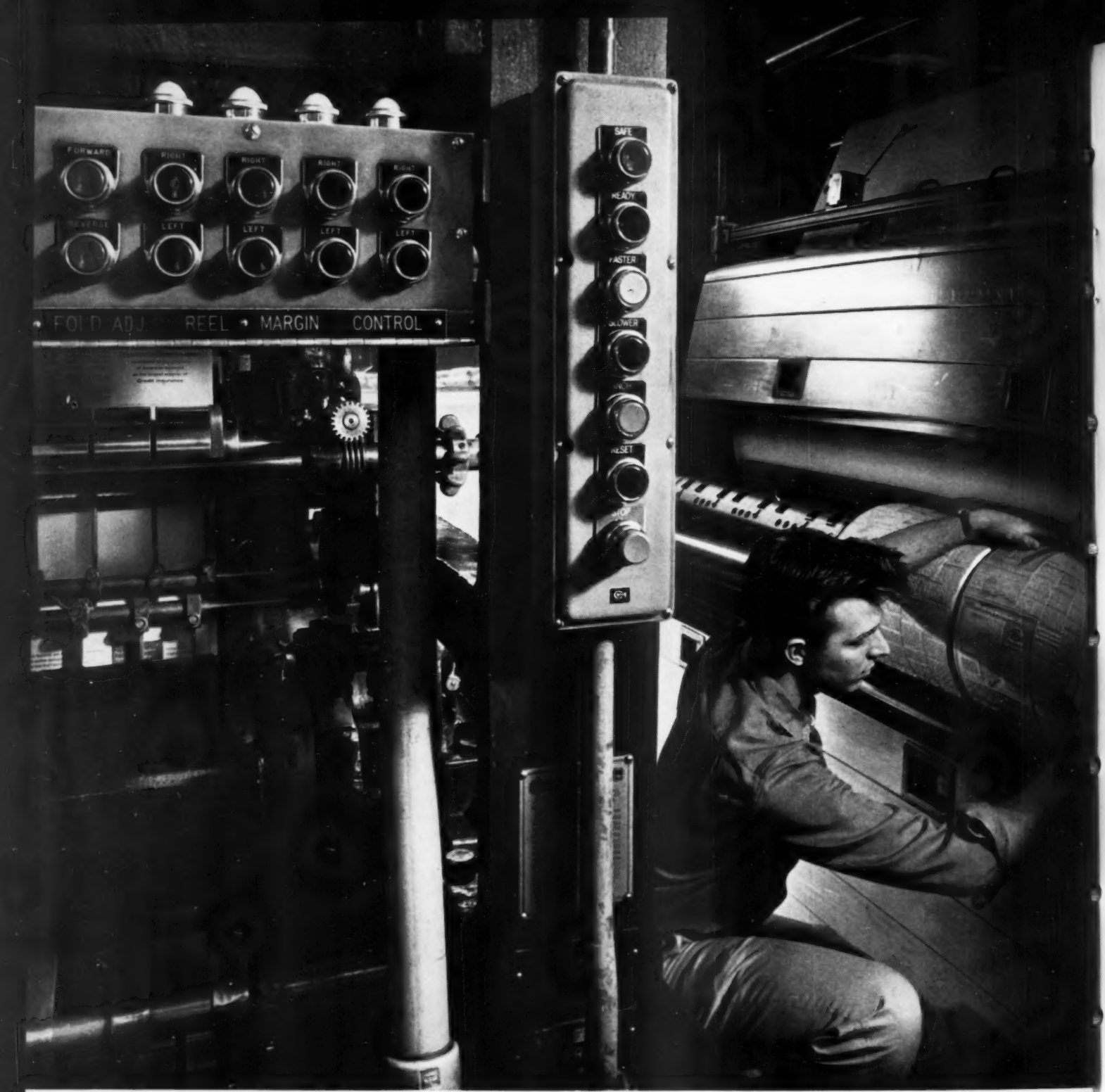
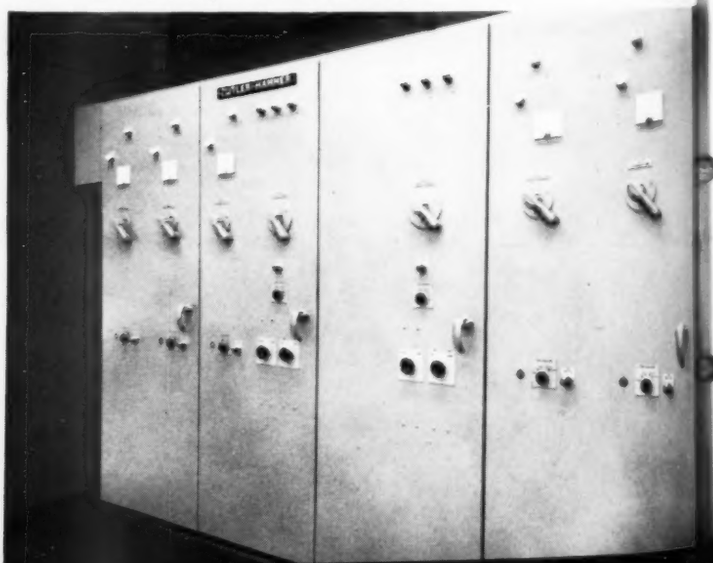


Ultra-modern unit presses (shown in two views above and below) operate in stepless speed increases to a maximum production of 70,000 Wall Street Journals per hour. Cutler-Hammer static conversion to D-c means maximum control, minimum maintenance.

Unit design of Webmaster means additional equipment can be installed in a minimum of time. Additional modular control sections can be coupled to existing installations without requiring major modifications or complete control re-design.



Cutler-Hammer D-c Webmaster Drives specified in new automated Wall Street Journal Plants

Cutler-Hammer Control and conveyors help the Journal solve problems of delivering a daily paper—nationwide

Wall Street Journal has all the production problems of a daily newspaper—plus the problems of *national* distribution.

To help alleviate these problems, the Journal recently opened two new, highly automated printing plants—one in Cleveland, the other in Chicopee Falls, Mass.

They contain some of the most advanced automatic equipment available including new Hoe Colormatic presses, capable of producing up to 70,000 papers an hour.

To control these presses, the Journal selected Cutler-Hammer Webmaster D-c Unit Press Drives—one for each press. Webmaster's static conversion of electric power produces stepless speed control from inching to top speed. Static power means greatly reduced maintenance; there are no moving parts in the conversion system.

The conveyors coming from the presses are electronically controlled by Cutler-Hammer, so that conveyor speed matches press speed. The Cutler-Hammer conveyors and custom-built delivery table contribute in meeting the complicated and specialized distribution problems of this national newspaper.

Let Cutler-Hammer supply you with the control you need. And be sure to specify Cutler-Hammer Control on the next equipment you buy. A Cutler-Hammer sales office is near you.

WHAT'S NEW? ASK...

CUTLER-HAMMER

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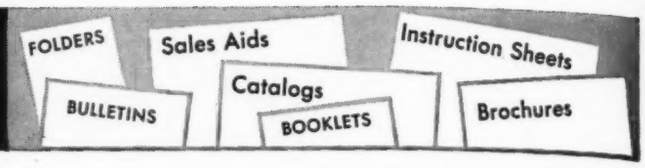
For More Information Circle 45 on Reader Service Card

HELPFUL LITERATURE



Circle Numbers on Reader Service Card in This Issue

Keep Yourself Informed. The folders and bulletins listed below all pertain to modern equipment, supplies, processes and/or methods. These have been prepared especially for plant managers, superintendents and foremen. Please circle the numbers on the Reader Service Card in this issue for the bulletins you wish to receive. Drop the self-addressed card in the mail. PRINTING PRODUCTION will forward your request.

Composing Room

PHOTOTYPESETTING FOLDER

A four page folder describing various types of film and paper used for photocomposition is available from Eastman Kodak Co. CIRCLE No. 330 ON READER SERVICE CARD.

Platemaking

DALIC PLATING PROCESS

An illustrated booklet describing equipment, application techniques and plating jobs suitable for the Dalic process is offered by Sifco Metachemical, Inc. The Dalic process, a method of electroplating localized areas of a workpiece without using immersion tanks, can be used on rotogravure printing cylinders, as illustrated in the booklet. Pits on rollers can be repaired with this process. The Dalic equipment is portable so that plating operations may be carried out wherever ordinary AC power is available. CIRCLE No. 326 ON READER SERVICE CARD.

NEW ASCORLUME CATALOG

American Speedlight Corp. has available a four page catalog covering the complete line of Ascorlume incandescent copy board lighting equipment. The catalog contains technical specifications of lamps, power control units, light units and accessories comprising the Ascorlume line. CIRCLE No. 317 ON READER SERVICE CARD.

PHOTOCOPY FILM PAMPHLET

A four page pamphlet on photocopy films for the Graphic Arts and engineering fields has been issued by Ampto, Inc., subsidiary of Anken Chemical & Film Corp. Described are the firm's six different types of positive films and special waterproof negative papers recommended for use with them. The pamphlet also serves as a price list. CIRCLE No. 315 ON READER SERVICE CARD.

FILING REFERENCE CHART

Atlas Stencil Files Corp. has prepared a reference chart listing the sizes and types of offset plates, negatives, artwork and color swatches which may be filed in Atlas filing systems. The correct hangers and cabinets available for each item are indicated. CIRCLE No. 313 ON READER SERVICE CARD.

BOOKLET ON ETCHING

A March 1961 edition of a spiral bound booklet on the use of Vitaplate and Vitasolv for powderless etching has been issued by Imperial Type Metal Co. The booklet includes information on the preparation of baths and plates and on etching procedure. CIRCLE No. 312 ON READER SERVICE CARD.

COLORTRAN LIGHTING SYSTEMS

ColorTran lighting systems for copyboards ranging from 28 in. to 70 in. high are described in catalog sheets issued by Natural Lighting Corp. CIRCLE No. 338 ON READER SERVICE CARD.

Pressroom

POLYFIBRON PRESS BLANKET

Literature has been published concerning polyfibron press blankets from the Dewey and Almy Chemical Div. of W. R. Grace & Co. Outlined is the installation of the blankets, and information is given regarding blanket removal and wash up. CIRCLE No. 334 ON READER SERVICE CARD.

PRINTING WITH GOLD INK

Marset, Incorporated, has issued a four page brochure on operating procedures for offset printing with Marset's J&B single impression offset gold ink. The brochure lists 17 points which are frequent trouble spots in getting best printing results with offset gold inks and methods to overcome these problems. CIRCLE No. 331 ON READER SERVICE CARD.

HEIDELBERG PRESS FOLDER

A 16 page folder, *Don't Lag Behind*, describes how litho, letterpress, rotary and flatbed are combined in one press. Set forth in the folder is information on the 15 in. by 20½ in. two color Heidelberg litho-letterpress unit and the resulting six ways of printing. CIRCLE No. 324 ON READER SERVICE CARD.

WEB OFFSET BOOKLET

Oxford Paper Co. has compiled a booklet on *Paper and Web Offset Printing* containing information on papers for the process and problems arising from their use. CIRCLE No. 320 ON READER SERVICE CARD.

DAHLGREN DAMPENING UNIT

Information on the Dahlgren precision plate dampening system is contained in a pamphlet from Dahlgren Mfg. Co., Inc. The system is claimed to be not an attachment but a complete replacement of the old type of dampening unit. Some of the many advantages listed by the manufacturer are no contact between plate and dampening unit and continuous duty water motion. The dampening system also is said to run less water on all jobs, permit use of letterpress papers and eliminate the major source of hickies. CIRCLE No. 335 ON READER SERVICE CARD.

WEB OFFSET PRESS BOOK

In a 32 page, pocket size booklet entitled *Blanket to Blanket Web Offset Perfecting Presses*, the Miehle Co., Div. of Miehle-Goss-Dexter, Inc., discusses, in non-technical language, the operation of web offset perfecting presses. Advantages and disadvantages and the place of web offset in the industry are also discussed.

The booklet is illustrated with photographs and diagrams of presses. It is recommended for use as a basic text for anyone who wants to know more about the process, and it contains a glossary of web offset terms. CIRCLE No. 340 ON READER SERVICE CARD.

Everybody in the newspaper business gains—from newsboy to publisher—when you use REEVES Vulcan PRESS BLANKETS. Better business with a better looking newspaper! Clearer reproduction. Longer press runs. These top quality packings are the only press blankets in which all materials are made by one manufacturer, REEVES. Improve press runs with REEVES Vulcan PRESS BLANKETS.

REEVES

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Eastern distributor: Niles and Nelson, 75 West Street, New York 6, New York
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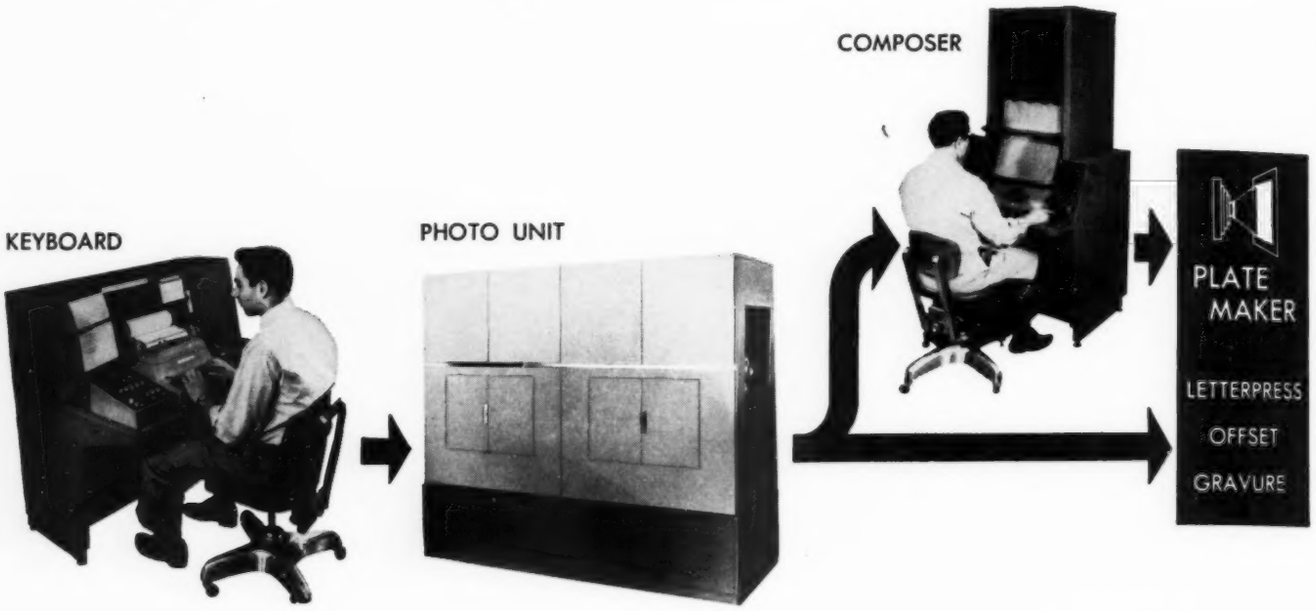
This is Linofilm!

the only complete system for photocomposition



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Mail the coupon today for details on how Linofilm can work for you.

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☐ **Send me the Linofilm brochure by return mail.**
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Address_____ Telephone_____

For More Information Circle 125 on Reader Service Card

PRINTING PRODUCTION

Wanted (or Needed): Technically Trained Men

RESEARCH results and new developments cannot be of value to a printing company unless there is at least one technically trained man on the staff who can understand and apply them. This statement by J. Homer Winkler at a personnel and training conference sponsored by the Education Council is one in which we can find complete agreement.

Winkler, who is a technical advisor of Battelle Memorial Institute, Columbus, O., advocates at least one such technician for every company having an annual business volume of at least $500 thousand. He also has some deep convictions in respect to the proper training of these people which are worth repeating.

According to Winkler, the most flexible training for such a man is chemical engineering. Graduates in chemical engineering quickly understand the wide variety of Graphic Arts processes. They seem to be most proficient in applying their knowledge to printing production problems.

Winkler also believes that college graduates being considered for positions in the Graphic Arts should have training in business administration and Graphic Arts processes if they are to be assigned to management and sales areas of the company. For assignment to production areas, a course in chemical engineering, including Graphic Arts processes, would seem to be the most suitable training.

Rightfully, he blames printing industry management for not effectively making known its needs in college training. It is not enough, he says, to provide good courses in printing administration and printing technology. There should be at least one college-level course available in Graphic Arts engineering and one in photomechanical engineering.

In addition, Winkler suggests efforts to have engineering, journalism and business colleges include a course in Graphic Arts processes in their curriculums. In his opinion, the present treatment of this subject generally is superficial.

We hope that Winkler's observations will eventually be heeded by both printing management and the educators. He has suggested a clear course for them to follow and placed greatest influence on preparation for meeting the rapid technological changes of our time.

The quick brown fox jumped over the
over the lazy dog. The quick brown
brown fox jumped over the lazy dog.
lazy dog. The quick brown fox jump

How Far Should Printers

Required reading for printers concerned with copy setting are these views by Pittsburgh Graphic Arts men on following copy.

Breathes there a printer with soul so dead,
Who never to himself hath said,
"What the hell is this guy writing about?"
—With apologies to Sir Walter Scott

AS every printer knows, it is a rare piece of copy that doesn't contain errors of some sort. True, most of the mistakes are of a minor nature—misspelled words, improper punctuation, or the use of a singular predicate with a plural subject, etc. What should the printer do about them? Follow copy or change it as he goes along?

Some copy misses the mark entirely. Sometimes the author's analogies are wrong, his statements not factual, or after stating his premise he reaches an illogical conclusion. How much of this is the printer's responsibility? Not the legal responsibility to refrain from printing libelous or illegal matter, but the moral responsibility to set type correctly so it conveys the message intended.

Where does he start changing copy . . . and where does he stop? Or, from another angle, should he do it at all?

Opinions on this subject were obtained in Pittsburgh from colleges, primary advertisers, advertising agencies, proprietors of printing establishments and individual printers. They all have theories and express them with conviction. Some say, "Follow copy . . . period." Others say, "Well, there are times . . ." And still another group contends copy can be wrong and if it's wrong change it.

Out the Window Theory

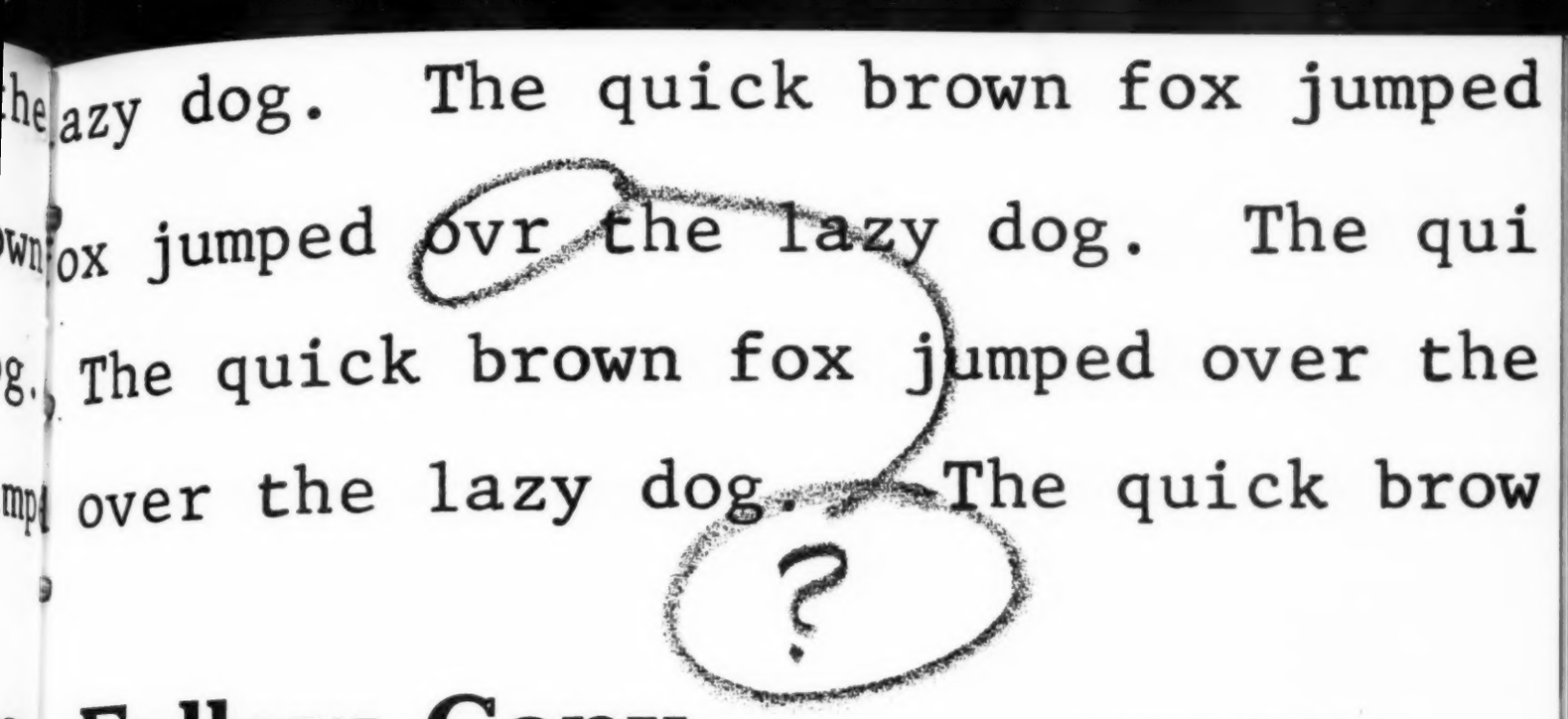
Among printers the expression "out the window" means follow copy—exactly. If the wind blows the copy out the window—jump. No matter what the copy says, or specifies, the printer should put it into type as nearly as is physically possible.

Leading the "out the window" contingent is Aluminum Co. of America. Its advertising department, headed by J. J. Maloney, does a thorough job on the copy before it reaches the printer.

ALCOA employs a full-time proofreader who goes over the copy checking spelling, punctuation, sentence structure, grammar, and word choice. After she has marked the copy it goes back to the writer for correction. Then a five member editorial committee works it over before the final manuscript is ready for the printer.

"We assume complete responsibility for the copy which the printer receives," Maloney states, "and there should be no need for the printer to do anything but follow the copy to the letter."

The advertising director of Koppers Company, Inc., William P.


azy dog. The quick brown fox jumped
ox jumped ovr the lazy dog. The qui
The quick brown fox jumped over the
over the lazy dog. The quick brow
?

Follow Copy

By JOHN M. MADDIGAN

Raines, concurs with this idea. Errors in grammar, spelling, punctuation? Set 'em! Errors in reprint copy, inconsistencies in typing? Follow copy! About the only thing Raines expects of the printer is that he correct errors not caught by the customer on revisions.

W. H. Parshall, advertising manager of H. J. Heinz Co., and Stephen C. Flanagan, his counterpart at Hagan Chemicals & Controls, expressed their sentiments in almost identical language. Follow copy, they tell their printers, but feel free to make suggestions. Neither Parshall nor Flanagan appreciates the printer making any alterations without his knowledge and consent.

Agency Says Follow Copy

In the agency field, Batten, Barton, Durstine & Osborn carries the ball for the follow copy team. The production manager of its Pittsburgh office, Charles A. Hobbs, prefers to have queries made on the first proof. If there is anything questionable—grammatical construction, spelling, punctuation, inconsistent capitalization, etc.—Hobbs wants the printer to follow copy then circle it on the proof.

"In both letterpress and offset printing," he states, "the type matter is read by our proofreader each time that a correction is made and if there is only a comma added on the previous revisions, the entire galley must be proofread."

Adding the weight of their numbers to the "out the window" faction the Printing Industry of Pittsburgh, Inc., local affiliate of the Printing Industry of America, Inc., assumes no responsibility for errors printed under certain conditions.

Trade Customs, PIP's guide to buyer-producer relations, contains seven references to copy, all of which place the responsibility on the customer. Corrections or alterations, according to *Trade Customs*, should be marked on a proof and returned "OK" or "OK with corrections." PIP insists that the printer is not responsible for errors in work printed with a customer's OK.

The largest of Pittsburgh's composition houses, Davis & Warde, Inc., takes just as severe a view of the subject. They think it is the customer's responsibility to provide clean, edited copy—anything less being an invitation to incur unnecessary costs.

"The printer's responsibility ends," says Thomas C. Pears, III, vice president of the 75 year old firm, "when he has set type and corrected it to match the copy. Sometimes he may have an understanding with a customer to correct obviously misspelled words as the compositor spots them but there is no compulsion to seek out and correct them."

The Sometimes Theory

Most of those interviewed agreed that the printer is not responsible for spotting errors and altering copy. A number of them, however, feel that circumstances alter cases. Among those so inclined are the assistant dean of the School of Printing Management, Carnegie Institute of Technology, and the advertising instructor at Duquesne University's Department of Journalism.

Dean Kenneth R. Burchard of Carnegie Tech asserts it is not the printer's primary responsibility but he should be as helpful as possible in correcting errors.

"In general," Dean Burchard continues, "I would say printers should correct small, obvious errors in grammar, spelling, punctuation, capitalization, and hyphenation, even though it should not be his responsibility to do so. Beyond this I think suspected errors should be questioned."

His fellow academician, advertising instructor E. J. Gregory of Duquesne, agrees. Adding that it gives a big plus to the printer's reputation and is to his credit when he makes corrections, Gregory feels it would be

continued on page 55

ANPA-RI OFFICIALS Not Ready to Predict Success of Offset Printed Dailies

ANPA-RI officials participating in the first newspaper web offset conference included (left to right): William D. Rinehart, director, Mechanical and Service Div.; Charles H. Tingley, managing director, and Fred Brickner, assistant director, Mechanical and Service Div.

First web offset conference draws 450 newspaper men to hear technical explanations of offset newspaper production.

By RODNEY G. BROWER
Assistant Editor

IT is still too early to predict if we are entering into a new era of printing the daily newspaper by offset," Charles H. Tingley, managing director, American Newspaper Publishers Association Research Institute, stated in opening the first web offset conference held last month at the conclusion of ANPA-RI Production Management Conference at the Palmer House Hotel in Chicago. Approximately 450 attended the session.

"The future expansion of offset will depend much upon the developments made by the equipment manufacturers now working feverishly on future equipment," he continued. Tingley cited, however, the number of daily newspapers switching to the offset process within the last several years. At present approximately 40 papers are utilizing offset for publication. Expansion into offset has been even more rapid in the weekly field with some 600 papers printed by this process.

Tingley announced at the conference, which was designed as a technical explanation of the various steps involved in printing by offset, the forming of an offset production committee of member publishers to advise how the various Research Institute departments could best be used to serve member newspapers deciding to print offset.

William D. Rinehart, director, Mechanical and Service Div., ANPA Research Institute, echoed Tingley's sentiments when he stated "offset is definitely in a formative state. Announcements of new processes, plates, inks and associated equipment are coming frequently. The techniques and equipment discussed here could well be obsolete in the near future."

Superior Reproduction

In mentioning advantages and disadvantages, Rinehart stated that the primary advantage to the daily newspaper was the superior reproduction available from the offset process, thereby enabling the newspaper to make extensive use of photographs at a very minimum of cost.

He added that an offset press required the same amount, if not more, labor than a conventional newspaper press of the same size and speed, and that web offset inks are more expensive than comparative conventional newspaper black inks. Offset inks run from

44c per lb. up, although the mileage is slightly higher than conventional inks per pound.

Although developments of practical offset plates have been numerous, Rinehart said that "offset plate making will restrict the use of offset by the larger dailies until it becomes automated."

He indicated that offset will make its first appearance on large metropolitan daily newspapers for printing of supplements. The process offers the possibility of equal reproduction to gravure while still allowing a later closing date for local advertising and editorial copy. He urged metropolitan dailies considering offset for supplements to take note of the increased activity in the development of preprints.

If both preprints and supplements are desired in the future, the offset press printing diameter must be such that inserts are printed the size of the paper's conventional letterpress. Printing within the size limitations of the inserting device would also be necessary.

"If any new process is to reduce newspaper production cost drastically, it must be one that reduces the labor cost in the composing room," Rinehart stated. "Offset will enable a publisher to readily and economically adopt any future higher speed phototypesetting equipment that can be foreseen," he added.

Major savings a newspaper will make using offset will stem from the introduction of cold type, phototypesetting, or other labor saving devices adaptable to use by offset, he concluded.

During a panel discussion on composition for offset covering hot metal, cold type and photocomposition it was stressed that money and time must be saved in this step to balance added costs in other areas of the process. One panel member indicated that his paper had found it cheaper to run as many halftones as possible rather than set large amounts of type for its television section, which is prepared by photocomposition.

There was also a discussion regarding the legibility of hot type faces as compared with cold type faces. A representative of Friden, Incorporated, requested comments from publishers on present Justowriter type faces as a prelude to the possible issuing of new faces for more readible body type.

Better Color Control

In his report on offset ROP color, Erwin Jaffe, ANPA-RI, said that offset offers the possibility of better color control than letterpress. He said that there were no known mechanical difficulties standing in the way of good ROP color; the main thing was to "have good men to turn out good color work."

Speaking about camera techniques Jaffe stated that offset offers the running of higher contrast pictures, the availability of using a finer line screen with no more problems than use of a conventional letterpress screen, better mechanical techniques and superior over-all visual effect.

"There is no proofing equipment available today which adequately fills the need for cold type or photocomposition proofing," claimed Frank J. Burrell, ANPA-RI, in speaking of proofing methods. The promise of better proofing methods in the future would likely involve some form of electrostatic printing directly from the pasteup without use of an intermediary contact print or autopositive, he added.

Burrell said that with further research there is a good possibility that RCA's Electrofax process could also be used for photocomp proof-

continued on page 84

Top: Participants in a panel discussion on composition for offset were (left to right): Dorsey E. Biggs, Typesetter sales supervisor, American Type Founders Co.; Harry Eybers, production manager, Washington (D.C.) *Post*; William Selby, plant superintendent, Lloyd Hollister, Inc., Wilmette, Ill., and Kenneth Johnson, publisher, Tri-County Publishing Co., Lamont, Ill.

Bottom: Reporting on daily offset operations in their plants were (left to right): Samuel Ballard, owner, Offset Newspaper Plants, Bay St. Louis, Mo.; John R. Thistlethwaite, publisher, Opalousas (La.) *World*; Staley T. McBrayer, publisher, Arlington (Tex.) *News-Texan*, and Carroll Knicely, publisher, Glasgow (Ky.) *Times*.

Through selective use of filters, author reports improved brightness rendering and proper color saturation from transparencies in producing

Pleasing Color Printing

By GYAN P. MADAN
Color Analyst

SINCE publication of the three-part series on *Pleasing Color* in PRINTING PRODUCTION,* we have done additional work to improve the scope and application of the single mask color separation technique. The single mask technique is intended for use in litho and photoengraving color platemaking.

As the result of the additional work, the single mask can now be made through filters so the reproduction shows improved rendering of brightness and proper color saturation.

Before discussing the new results, we will review the aims and purposes of the *Pleasing Color* technique as outlined in the original three-part series.

It was stressed that facsimile reproduction of an original is seldom required more often an interpretation of an original is desired to compromise the mutual requirements of customer and printer. The buyer and the seller of color printing settle at a point somewhere midway between the two extremes of quality and cost. Such a reproduction should contain an over-all effect of the original with colors pleasing to the eye and a quality which can be sold. Technically, this interpretation was referred to in the original series as pleasing color.

We found that with the exception of few full tone originals (color transparencies), the single mask technique can be effectively utilized. It is fast and simple. Since only one mask is used, it offers the advantage of perfect register throughout the entire procedure.

The technique, with little change, is applicable to lithography, photoengraving, photogravure and other processes. With this technique, the color separations can be made by both direct and indirect methods. The results produced are satisfactory, but they could be better.

We further observed that, though the single mask made through Wratten filter No. 85B produces sufficient color correction in most originals, it does not fully correct the darker tones in some cases. Also it does not add enough color saturation to originals with one or two predominant colors or with unbalanced color distribution.

The New Approach

In our study, as mentioned above, we found that if the single mask could be made through filters which would suit these requirements, the results of pleasing color reproduction could be made to show improved rendering of brightness and proper color saturation.

For this kind of approach, the following three color transparencies were selected:

(1) Color transparency A with balanced distribution of overall colors.

(2) Color transparency B with predominantly green colors.

(3) Color transparency C with predominantly blue and green colors.

In selecting these transparencies, efforts were made to have them of the same density range as the one used in explaining the pleasing color technique in the previous articles.

The filters for making a single mask for each of the above transparencies were chosen as follows:

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*See Sept., Oct. and Nov. 1960 issues.

Wratten Filter No. 85B for Transparency A;
Wratten Filter No. 33 for Transparency B;
Wratten Filter No. 29 for Transparency C.

Then three unsharp masks were made on Kodak Pan masking film (Estar base). The rotating method of making the mask was adopted. The exposure and development times used for making the masks and the densities obtained are recorded in Table I.

It should be pointed out here that the function of a single mask in the pleasing color technique consists in providing sufficient color correction by conceling the unwanted colors, and in compressing the range of the transparency within the limitations of the printing process applied.

Check Mask Effectiveness

It is usually good practice to check the effectiveness of the masks for these factors before proceeding to make separation negatives. In case of any major error, the masks should be re-made at this stage. Incorrectly made masks can lead to difficulties in later steps, and frequently require costly handwork in separation negatives.

In the present case, the three masks were placed in register with the transparencies in the following order on a light table:

Mask 1 with Transparency A;
Mask 2 with Transparency B;
Mask 3 with Transparency C.

In order to check the color correction, it was particularly noted that such masks, when combined with their respective transparencies, would cancel the unwanted colors. At the same time they would protect the highlights and middletones without the loss of the shadows.

In order to examine whether or not the mask had compressed the range of the transparency within the limits of the printing process used, the combined shadow and highlight density of each mask and the transparency were read on a densitometer. These readings are shown in Table II.

For reference purposes, the reproducible density range for different printing processes is given in Table III and will be found helpful.

Next, the separation negatives were prepared by contact on Kodak Separation Negative Film, Type I (Ester base) through three Kodak Wratten filters Nos. 25, 58, and 47B.

Balancing Separation Negatives

The exposure and development times were so standardized that a matched set of separation negatives was obtained from each mask and transparency combination. This was done by balancing the separation negatives at a range of 1.40 with a minimum density between 0.30 and 0.40. The aim in selecting these density values was to obtain correct tone reproduction and color balance in the final reproduction.

The exposure and development data used for making the separation negatives are summarized in Table IV. They were determined by the trial and error method. The final adjustments, however, were made by means of the Kodak Graphic Arts exposure computer and the film data sheet. These data would be useful to many readers, but would probably require a few changes to fit individual working conditions.

These separation negatives were then converted into halftone positives using Kodak magenta contact

continued on page 86

TABLE I

Mask Exposure, Development and Density Data. ▶

Masks	Filter	Exposure 100 W., 16V.	Development				Densities		
			Type	Dil.	Time	Temp.	High	Low	Range
Mask 1	85B	12 sec.	DK-50	1+2	4 min.	68°F.	1.14	.26	.88
Mask 2	33	8 sec.	DK-50	1+2	4 min.	68°F.	1.16	.24	.92
Mask 3	29	10 sec.	DK-50	1+2	4 min.	68°F.	1.1	.25	.85

TABLE II—Densitometer Readings.

	Densities		
	Highlight	Shadow	Range
Transparency A + Mask 1	1.50	2.95	1.45
Transparency B + Mask 2	1.52	2.94	1.42
Transparency C + Mask 3	1.52	2.96	1.44

TABLE III—Reproducible Density Ranges for Processes.

Printing Process	Reproducible Density Range
Photogravure	1.20-1.30
Letterpress	1.20-1.40
Lithography	1.40-1.60

Separation Negative	Filter	Exposure 100 W., 16V.	Development			
			Type	Dil.	Time	Temp.
For Cyan Printer	25	15 sec.	DK-50	F.S.	4 min.	68°F.
For Magenta Printer	58	35 sec.	DK-50	F.S.	3½ min.	68°F.
For Yellow Printer	47B	70 sec.	DK-50	F.S.	4½ min.	68°F.

◀ **TABLE IV**

Separation Negative Data Summarized.

E. Bert (left), U.S. Steel Corp., demonstrates a bundle tying machine at the ANPA-RI equipment show for the benefit of Joel C. Arnold, mechanical superintendent, Palm Beach (Fla.) *Daily News* and *Life*, and Wallace Reichert, art and dispatch director, West Palm Beach (Fla.) *Post-Times*.

Conversing at the Sinclair & Carroll exhibit are, left to right: Thomas P. Carroll and William E. Rutenberg, Sr., both of S&C, and H. Leffel, assistant engraving foreman, and A. C. Mills, general engraving foreman, both of the New York *Times*.

An Exclusive PRINTING PRODUCTION Report

Management Openly Sponsors

Newspaper supervisors attending ANPA-RI Chicago conference also hear of newly-developed equipment, photocomposition, web offset printing and engineering

By MacD. SINCLAIR, *Consulting Editor*, and RODNEY G. BROWER, *Assistant Editor*

NEWSPAPER management sounded the keynote for the Production Management Conference of the American Newspaper Publishers Assn. Research Institute held at the Palmer House, Chicago, last month.

With the encouragement of newspaper management spokesmen, the production managers, superintendents and departmental foremen were made to feel that the three-day program was prepared especially for their benefit as management representatives in producing newspapers efficiently and at reasonable cost.

In addition to the recognition accorded them by management, the production men learned many things about plant administration and new technological developments as used in newspaper printing plants.

Three management executives addressed the opening session. These were Richard L. Jones, publisher, Tulsa (Okla.) *Tribune*; William Dyer, general manager, Indianapolis (Ind.) *Star-News*, and James S. Copley, chairman, Copley Newspapers, LaJolla, Calif.

Jones commented that newspapers can no longer afford delay in using effective means for reducing manufacturing costs. Managements in union and nonunion plants can afford to compare costs. Both have an interest in operating at lowest cost.

Dyer asserted "We have got to learn how to make better use of manpower. One way in which this can be done is to get cooperation from the men in helping us make better use of manpower."

While speaking primarily about administrative policies of the Copley Newspapers, Copley mentioned the three inseparable elements in newspaper production – *Men, Methods and Machines*. He said: "In the same manner that the em-

All eyes are on the plate finishing operation being performed at the ANPA-RI Conference. Left to right are A. C. Woodall, stereo foreman, Houston *Chronicle*; Chesley Carlson, Chesley F. Carlson Co.; Christopher Wilson, technical advisor, and John Forrest, London manager, both of *Westminster Press*, London, England.

The first offset plate made at newspaper conference may be seen on display behind Tom Skoog (left), Minnesota Mining and Mfg. Co., and T. R. Sykes, production manager, Toronto (Can.) *Star*.

Examining stereotype equipment are, left to right: A. E. Katz, production manager, New York *Times*; Al Nolan, Nolan Corporation, and H. R. Witte, stereo general foreman, also of the *Times*.

Production Men as Part of Its Team

ployee is entitled to get the highest possible return from his efforts, the newspaper industry must also get more for its money. . . . It will get it best through providing not only better machines but training and encouraging men to use all their tools better. Personnel power is still being wasted in the newspaper business. . . . One way to stop such waste is better supervision."

In discussing men, methods and machines, he said, "I would like to say that of the three, it is the *men* who will make the methods and machines work. . . . In our newspapers we are trying to build these men into a great team. The quarterback calls the signals, but if a touchdown is wanted teamwork is a must."

Production Man's Labor Role

Using a straight-forward approach, Donald McVay spoke on the *Production Supervisor's Role in Labor Relations*. McVay is executive secretary of Publishers Assn. of New York City.

He said: "The production supervisor is responsible for means, method and efficiency of production—not for labor relations. Labor relations may affect efficiency of the means and the method, but the means and method should not be dictated by or be the production of labor relations.

"As production supervisors," he continued, "you are a part of management. It is your responsibility to decide upon, and implement the means and method of production, and to establish the standard of production efficiency."

McVay cautioned: "You fellows are management. . . . Any of you who try to perform the management task while trying to act like good union men are mixing your responsibilities in a dangerous way.

"Some of you maintain active (union) cards. That is perfectly all right as long as you do not try to act as a representative of the union once you assume the cloak of management.

"Only management decides the means, the methods, and the material of production. Only management initiates action. Only management is business."

The speaker defined the union's role (in production) as representing employees. "However," he said, "the union has a legal right to be in the scene only as a representative of employees for the purpose of bargaining and grieving. Right thinking management does not ask employees to make management decisions, nor does any good management leave these decisions to the union.

"The union acts as a check on the unbridled exercise of management authority."

McVay warned production supervisors: "You must not pollute your thinking with the idea of being . . . an intermediary between the objectives of management and the objectives of labor. However strong your sympathies may be for the ambitions of employees to enjoy more fruits of the business, if any, your first obligation is to run the business so that there can be more fruits.

"Production supervisors, superintendents and foremen have to provide leadership in the shop. You cannot carry the element of leadership and common respect and compliance of your men if you do not know where you are going.

"Instructions and orders must be clear, concise and unequivocable.

Other ANPA Conf. Stories on Pages 62, 63, 64 and 65

When you are wrong the union will take you to task through the grievance machinery we all have in our contracts. When this happens, leave the debate to management's labor relations expert."

Hot Metal Ad Pasteup System

An illustrated description of the hot metal ad pasteup system developed at the Garden City (N.Y.) *Newsday* was presented by Allan M. Woods, production manager. In brief, this method of ad composition consists of stripping the type face lines from slug bodies to 0.065 in. (16 ga.) thickness on a specially constructed bandsaw. No photoengraving of the type lines is required.

Like photocomposition, provision is made for "setting white space" between the lines by spacing them with slugs as indicated in the layout before stripping the slugs.

When the properly spaced slugs have been assembled in blocks on the galley, the type face is covered with a one-side adhesive Mylar tape. The group of slugs held together by the tape is then stripped in the bandsaw to 16 ga. thickness. The stripped blocks of type are fastened to 0.853 in. base with adhesive. The last operation is to remove the Mylar tape from the type face itself.

Woods explained that at present from 20% to 30% of *Newsday's* ad composition is being done by the Striptype process. Standard Elrod and stereo metal base is used upon which to mount the stripped slugs, photoengravings and stereo shell casts. Ad corrections can be made readily since the adhesive used to mount type and cuts permits removal or change in position. After ad assemblers have been trained properly, said Woods, there is a time saving of about 25% in making up a retail display ad. In positioning the type elements, a ruled Plexiglas sheet and light table are used.

James H. Lamade, vice president, Grit Publishing Co., Williamsport, Pa., revealed why his company decided to print the 900,000 circulation weekly *Grit* by offset. (See PRINTING PRODUCTION, page 52, April 1961.)

Explains Process Change

Lamade said: "We possess a belief in the future of our product and its continued acceptance by our readers in Small Town America *if* we keep up with the more sophisticated and higher developed tastes of America for color in its reading habit. . . . Our weekly audience is constantly comparing *Grit* with newspaper supplements and the better printed magazines."

The speaker spoke of the many production headaches before efficient composing room operation will have been attained. He said: "Our editors are going to feel the wrath from our production people like never before until they turn out

ANPA Equipment Exhibits Attracted Hundreds of Visitors

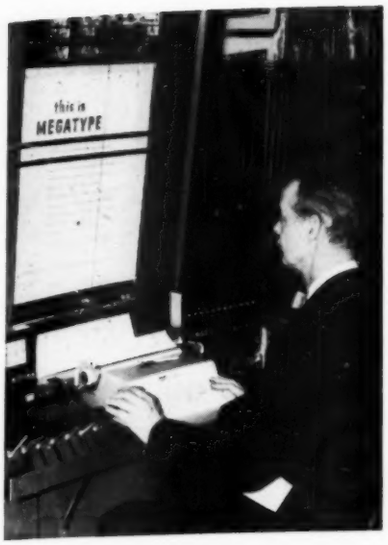
(All names read from left to right)

1—Carol O'Brien of New England Newspaper Supply Co. pins a boutonniere on Lawrence Harris, engraving superintendent, Raleigh (N.C.) *News and Observer*, while Adrian B. Kaiser, mechanical superintendent, Toledo (O.) *Blade*, receives one from Judy Chapin.

2—A demonstration of Algrip flooring grips the attention of this group. In the picture are Tom Hagan and Tom Garland, both of A. M. Castle & Co., distributors, Michael Daview, assistant to publisher, Peterborough (Can.) *Examiner*, and Lee Struif, also of Castle.

3—Looking at the product of a new camera-processor machine are Robert N. Brown, general manager, Columbus (Ind.) *Evening Republican*; G. H. Edgar, Jr., Reproduction Equipment Co.; George Rothermel, Imperial Type Metal Co.; Veldon S. Dickerson, composing foreman, Indianapolis *Star and News*, and Morrie Rice, Ludlow Typograph Co.

4—This happy group consists of: Paul Richmond and Andy Carpenter, Burgess Cellulose Co.; Leland H. Satre, Tri-Q, Incorporated; Lee L. Doll, Intertype Company, Div. Harris-Intertype Company.



At the ANPA-RI Conference, a new phototypesetting machine, called the Megatype, was demonstrated for the first time by the inventor, Don McCray (see *Printing Production*, Feb. 1961, page 94).

clean copy – for the expenses of makeover will be much more critical than ever before. . . . The business office is going to be a little upset when newsprint waste has tripled or quadrupled." He also spoke of ink costs by comparison with present inks and said ". . . they will look a terrifying five times greater. Plate costs that once were insignificant will look exhorbitant when instead of remelting they are either thrown away or sent out for recoppering."

With reference to costs incurred by changing to web offset, Lamade commented: "I wish I could tell you of all the additional costs that we are entering into to get off the ground with this process. Unfortunately, or perhaps fortunately, we still don't know some of them ourselves."

Among the additional cost items mentioned by the speaker were driers for heatset inks, separate pumping systems to carry inks to the black perfecting units, and chilling cylinders requiring cooling water with a separate cooling tower. One of the biggest challenges, he said, lies in the retraining of personnel.

Lamade's concluding remarks included the statement: "We face the challenge ahead with confidence. . . . Just as we now feel that our product should be upgraded, I am certain that the daily newspaper field in future years must improve the quality of the package it is supplying to its customers."

Visitor from England

The new plant building for the London (Eng.) *Daily Mirror* was described by Jack Holroyd, director of production and personnel. The *Daily Mirror's* weekday circulation is 4,600,000 copies and the *Sunday Pictorial* circulation is 5,500,000 copies.

The interior of the building covers a floor area of nearly a half-million sq. ft. The new 12 story building reaches 169 ft. above sea level. In the basement excavation the substructure consists of four basement floors reaching down 45 ft. below street level and covers the site area.

The production floors and the main editorial floor all are designed for 200 lbs. per sq. ft. live loading. The ground floor, however, is designed for a loading of 500 lbs. per sq. ft.

ANPA Equipment Show Views

(All names read from left to right)

1—A careful examination of the new Photo Lathe electronic engraving machine is made by E. A. Edge, Jr., machinist, Tupelo (Miss.) *Daily Journal*; Floyd M. Pilling, composing foreman, Olean (N.Y.) *Times Herald*, and George McLean, publisher of the Tupelo *Journal*, as Bill Barron, Graphic Electronics, Inc., describes the unit.

2—The ATF Typesetter is the focal point of George Kunz, production manager, South Bend (Ind.) *Tribune*; Bryant Mansfield, American Type Founders Co., and Alex Posick, composing superintendent, South Bend *Tribune*.

3—Ralph C. Myers, composing superintendent, *Rocky Mountain News*, Denver, watches a demonstration by Al Friedman, Filmotype Corporation, of the Alphatype photocomposition machine.

4—The grandfather-grandson team of Joseph P. Dorr, president, and Francis J. Storke, second vice president, Capital Tool & Supply Co., were again on hand.

5—A powderless etching machine is the supporting prop in this picture of Wes Miller, Master Etching Machine Co., and David Storey, Vancouver, Can.

An Exclusive PRINTING PRODUCTION Report

TAGA Speaker Predicts:

Outside Help Necessary For Printing Research

Graphic Arts scientists report on research progress during Columbus technical meeting.

By RODNEY G. BROWER, *Assistant Editor*

NINE-TENTHS of Graphic Arts progress in the next decade will be made in fields outside of the Graphic Arts according to a prediction Dr. Jack J. Bulloff, Battelle Memorial Institute, made at the 13th annual meeting of the Technical Assn. of the Graphic Arts.

Bulloff stated that if progress in the Graphic Arts is to be made more rapid, research ought to lean more heavily on techniques, approaches, processes and products developed for other purposes. In presenting his paper on novel chemistry for use in Graphic Arts, Bulloff advocated avoiding research that leads to just another Graphic Arts problem.

Bulloff's address was named the paper of the year by the approximately 180 researchers and scientists attending the TAGA meeting held at the Deshler-Hilton Hotel, Columbus, O., June 12-14.

He stated that the printing press will become obsolete as nonmechanical means of printing, such as photographic printing, may someday come into use. Instead of visible light, images might be produced by use of infrared, ultra-violet or gamma radiation, either with light sources known today or with new ones made possible by solid-state chemistry.

Instead of chemical materials having photosensitivity, some materials might be evolved that can print out certain unwanted areas with particle beams of light, he added.

Bulloff said that at the present, the transfer of image from master to paper is the process of most general concern. The multitude of problems arising from this process is testimony to its potential obsolescence, he added. Such problems include the wearing of printing surfaces, the transfer of inks that are harder to both print and dry as press speeds are accelerated and the conditioning of printing surfaces so they will perform satisfactorily by either letterpress or offset printing.

New TAGA officers for the coming year are, left to right, seated: William T. Reid, Battelle Memorial Institute, first vice-president; Warren L. Rhodes, Graphic Arts Research Dept., Rochester Institute of Technology, president, and F. L. Wurzburg, Jr., Interchemical Corporation, second vice-president. Standing: Albert Materazzi, Litho Chemical & Supply Co., board member; William C. Walker, West Virginia Pulp and Paper Co., retiring president and new board member; Norman Reamer, Stanford Research Institute, secretary-treasurer, and Earl I. Sundeen, Eastman Kodak Co., executive secretary. Not shown is Bernard R. Halpern, E. I. duPont de Nemours, board member.

Chemistry and Plate Wear

Chemistry enters into the picture of plate wear in two ways. Not all printing wear is caused by friction; some is chemically accelerated and some is entirely due to chemical action, Bulloff said. Failure of surface plates to give long runs and scumming and tinting of litho plates is often brought about by conditions similar to those causing friction. Chemistry also provides means to predict wear of printing surfaces.

One general remedy for the wear of plate surfaces is to use a coating

A group of TAGA members question Dr. Jack J. Bulloff following his talk during the three day conference.

of a harder metal, the speaker said. Chemistry has opened up new routes in the preparation of printing surfaces, such as simplifying formations of coatings or producing new coating for use on metal or nonmetal bases. In turn, this has assisted in improving surface hardening of electrotypes and hardsurfacing of photopolymer letterpress plates.

Complicated Ink Problems

Ink problems could be solved with little uncertainty, Bulloff said, if it were not for the interrelation of plate image heights, makeready inequalities, variations in paper and ink, and the specific requirements of the various printing operations and materials.

Ink technology has advanced considerably and could advance more rapidly were the Graphic Arts open to considerable immediate variation, he said. The demands made upon inks by increased press speeds and production can only be met by sacrificing one ink property or quality in favor of another.

At a business meeting held during the three day session TAGA's educational committee reported on progress in starting a scholarship to stimulate interest in research in Graphic Arts problems at the university level. Further study will be necessary before any concrete program is determined. Present total paid TAGA membership was announced as 560 members.

The 14th annual convention will be held at the Hotel Radisson, Minneapolis, Minn., June 11-13, 1962.

Among other reports presented was a discussion by Paul F. Borth, Photoengravers Research Center, Inc., Park Forest, Ill., on powderless etching of copper based on the formation of a protective film on the plate surface by reaction between copper ions and an organic additive to the etch solution. Bath solutions presently known to the trade as GT-1 and PERRI 13a were discussed and the effects that each has on plate etching were mentioned.

One advantage of the powderless etching process is improved mechanical properties of the etched

continued on page 68

Speakers at the recent TAGA meeting (all names reading left to right) were, upper left: Robert Flesch, new products manager, Minnesota Mining and Mfg. Co., discussion leader; Paul F. Borth, Photoengravers Research, Inc.; Norman G. Tompkins, W. R. Grace & Co., Dewey and Almy Chemical Div., and R. E. Maurer, Eastman Kodak Co. Upper right: James M. Dugan and L. E. Walkup, Battelle Memorial Institute; Benjamin Sites, director of technical research, Miehle-Goss-Dexter, Inc., discussion leader, and J. J. Rheinfrank, Battelle Memorial Institute.

Among those attending sessions were, lower left: Samuel L. Cozzens, National Printing Ink Research Institute, Leigh University; Edward Born, Fred'k H. Levey Co., Inc.; lower right: Kelly Hicks, research director, Kingsport Press, Kingsport, Tenn.; Endre Toth and Gerald Larson, both of Minnesota Mining and Mfg. Co.

By **JOSEPH KIRSCHBAUM,** *President*
Institute of Industrial Launderers, Inc.

Too many workers are dressed to kill . . . themselves.

Clothes Make the Man — Safe

IS it absolutely necessary for printing plant employees to look like coal-covered miners?

The answer to that question is emphatically—no! Many printing employees dress in well-fitted uniforms that are laundered and repaired as often as necessary. Yet too many persons in the printing industry dress in soiled and loose fitting clothing that is termed as an eyesore and breeder of accident and health hazards by the National Safety Council.

To aid in identifying unsafe wearing apparel, the National Safety Council and the Institute of Industrial Launderers have compiled this list of the seven deadly sins of work clothing· Dirty garments that can cause skin diseases, infections and rashes; clothing soaked in oil or flammable chemicals that can be easily ignited; sleeves which are missing cuff buttons and thus can become tangled in some machine.

Also, loose garments that might catch in a machine; poorly maintained garments; clothing with loose belts or fancy features that might become entangled with moving parts or fixtures.

A Leading Accident Cause

According to a 1959 report of the Safety and Insurance Committee of the Flat Glass Jobbers Assn., unsafe clothing ranks second as a cause of the accidents that are due to unsafe mechanical or physical conditions. Forty-six (or 16.4%) out of 281 accidents investigated were blamed on unsafe dress. The number one cause is identified as hazardous arrangement or procedure.

How do such accidents come about?

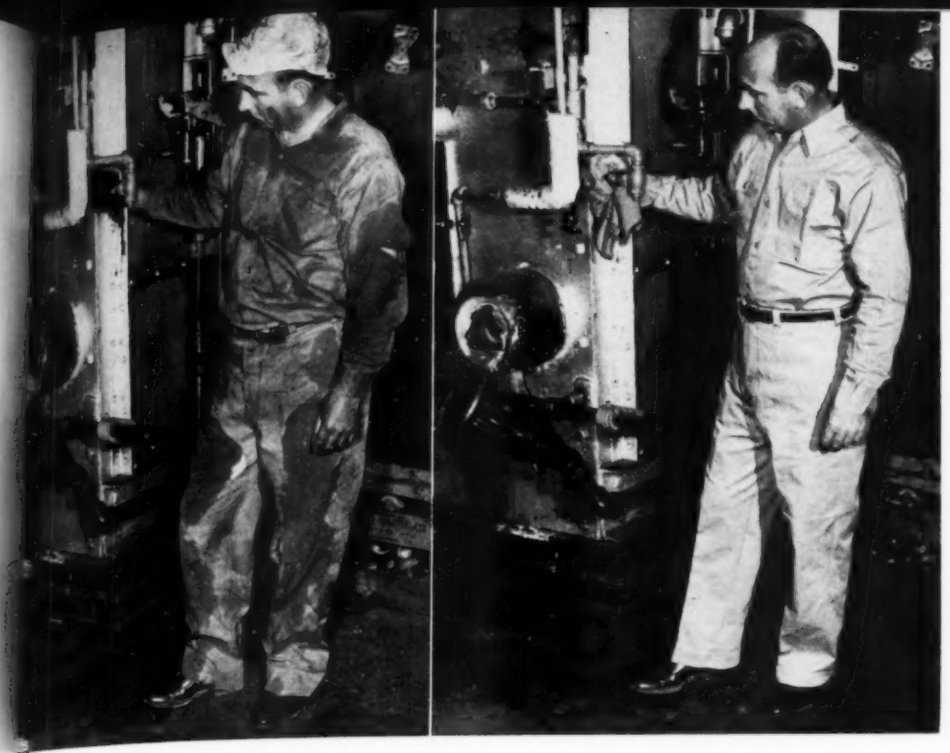
Consider the recent case of a 28 year old machine shop worker in Erie, Pa., who lost his right leg through an accident involving defective work clothing. Like most accidents, this one could have been prevented.

The man, a grinder operator, was wearing loose, floppy trousers with cuffs on them. A draft of air caught the pants cuff, literally blowing it into the grinder gears. The worker's right leg was pulled into the machine almost to the knee before a fellow employee could cut off the power.

Safety Blind Spot

This is a case that occurs over and over again in industry. The fact that work clothing is closely associated with accident rates is too often overlooked. Perhaps the very obviousness of it has caused defective work clothing to be a safety blind spot.

As a guide to printing plant owners, the Institute of Industrial Launderers, along with the American Standards Assn., has compiled a list of specifications for safe working apparel.



Before — Employee in the picture on the left is dressed dangerously in oil-soaked clothing that can easily be ignited, turning him into a human torch.

After — In right picture, the same employee is dressed in a clean and well-fitted uniform that conforms to National Safety Council specifications.

One such specification is that uniforms be simple, not fancy. Some executives, who have no experience in the uniform field, tend to favor uniforms that are flashy, that look like a million dollars. Unfortunately such uniforms are not practical for on-the-job conditions because they usually must be dry cleaned.

Inevitably the employees resent spending their money to have uniforms dry cleaned once or twice a week. Longer and longer periods elapse between cleanings, and some will try to launder them in family washers. It isn't long before such fancy uniforms lose their sharpness. Instead of being safely clean and reaping public relations benefit, as the uniforms were intended to do, quite the opposite is true.

It is the consensus of members of the Institute of Industrial Launderers, who supply industry with more than 90% of the uniforms used on a rental basis, that cotton work garments are by far the most practical. Standard colors seem to work out the best for most purposes. These come in a wide variety of shades and hues; so there is a broad range of choice.

Avoid Fancy Features

If a company desires a distinctive garment, it should achieve this end by using emblems on simple uniforms, not by fancy features on the uniform itself. This accomplishes two ends by keeping the uniform practical and inexpensive and by focusing attention on the emblem which can bear an advertising message.

Advertise with Drivers

Since the printing business is extremely competitive, it is wise for a company to put its drivers and other delivery people in uniform. These people are highly visible, and the impression they make can help or hurt business.

If a company's drivers wear sloppy, nondescript clothing, people may conclude that the work done by the company will be of the same calibre. After all, to the public, the driver represents the company. If he is neat, well-dressed and wears the company emblem, the reasonable inference will be that the company is business like, on-the-ball and a place where a top printing job will be produced.

Advice about safe uniforms and copies of the National Safety Council leaflet on work clothing is available from the Institute of Industrial Launderers, 1833 Jefferson Place, N. W., Washington, D. C.

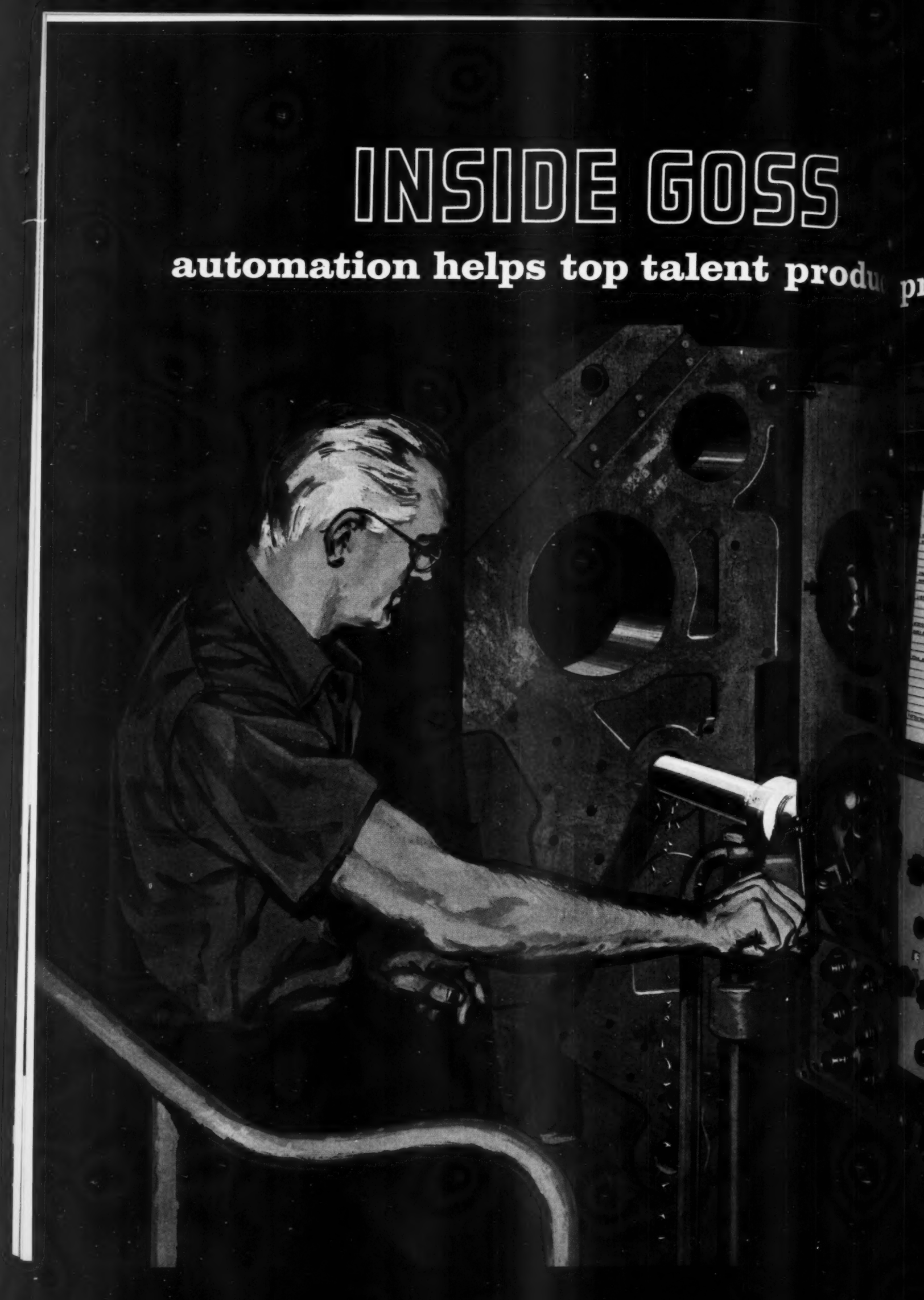
Old Engravings on Exhibit

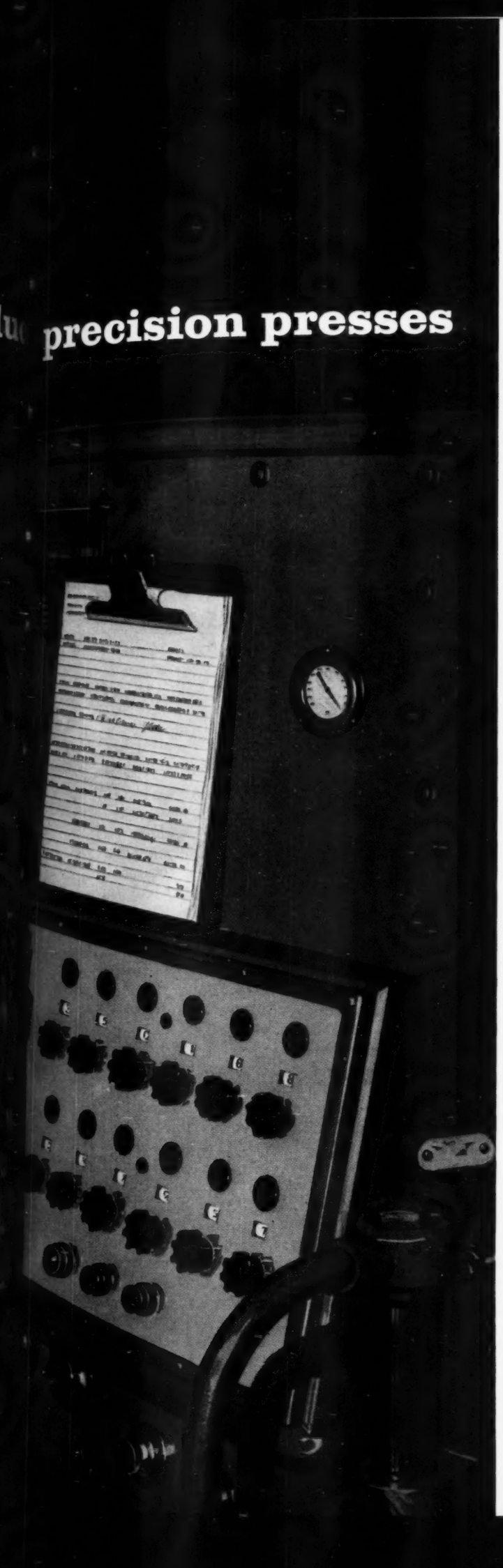
A collection of original engravings from the 16th to the 19th century featuring printing in olden days is currently on exhibit in the gallery of J. H. Villard, Inc., 175 Fifth Ave., New York 10. A descriptive list of the subjects on display may be obtained by writing and requesting list number 118-A.

Good psychological results can be obtained by providing plant employees with matching, well-fitted and regularly cleaned uniforms to wear while working.

INSIDE GOSS

automation helps top talent produ pr





precision presses

The men who design and build Goss presses deserve the lion's share of the credit. But they're the first to acknowledge how essential our automatic equipment is in turning out the Goss quality you've come to expect.

The machine you see here is just one result of a *planned replacement program* that constantly seeks out and tests the latest machining methods and equipment. Whenever something is developed that does a better, more accurate job than what is being used, plans for replacement begin immediately. Few other companies, outside the aircraft industry, have utilized tape-controlled machining to the extent that Goss has.

The dividends for you? Hairline tolerances and highly accurate components enable us to build the most precise presses—equipment that delivers higher quality reproduction . . . adjusts easier and stays adjusted . . . and lasts longer with less maintenance and attention.

Good reasons for coming to Goss.

***3** out of **4** American daily newspapers are printed on Goss presses*

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CHICAGO 50, ILLINOIS

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By MacD. SINCLAIR, *Consulting Editor*

R&EC Speakers Report on Making New Equipment Work

Plant executives tell about successful production experiences in using newly developed typesetting, press, platemaking and bindery methods at Des Moines meeting.

GETTING accustomed to proper ways of securing rated output from newer types of equipment and methods in the period following installation was described by a number of plant production men at the recent Research and Engineering Council conference.

About 225 attended the conference which was held in Des Moines, Ia., the latter part of May. The 1962 meeting is scheduled for June 4-6 at Hotel Sheraton Park, Washington, D.C.

Some highly successful typesetting installations—both hot metal and film—were described as examples of what can be accomplished in type composition.

Of no less absorbing interest also were the addresses regarding newer types of printing plates, pre-registering system for curved electrotype plates, as well as adhesive application in bindery opeiration.

Sheeting from the roll in the larger printing plant was told about by Paul Lyle, operational superintendent, Western Printing and Lithographing Co., Racine, Wis. (see story on page 67).

Charles Cook, in charge of technical procedures at Haynes Lithograph Co., Rockville, Md., related experiences incidental to installation of a web offset press and getting accustomed to its operation after installation. (see story on page 59).

Program Chairman C. M. Flint commented that R&E Council members are highly interested in all avenues to cost reduction in printing plant operation. They are interested not only in what's new in equipment and methods but also in how to apply them in plant operation to get the benefit of cost reduction.

In an informative address, Alan J. Horton of Minnesota Mining and Mfg. Co.'s Graphic Arts research department, pointed out that the payoff on research is cost reduction. Horton said the formula for developing new ideas and making them work in the plant consists of three parts: (1) Get excited; (2) Stay excited, and (3) Channel the excitement through the organization.

Tape Activated Operation

Preparation and installation of TTS straight matter composition in the plant of Maclean Hunter, Inc., Toronto, Can., was described by George H. Harper, superintendent. The firm does mostly publication work both by letterpress and offset.

Harper said that some time ago it became necessary to consider installation of additional equipment to handle the over-all volume of hundreds of columns of type on tight three-day delivery schedules. Previous to installation of the TTS equipment the firm had been operating 13 manually operated body machines together with six display machines two shifts per day. In considering new equipment, additional costs of manually operated machines together with overtime costs were analyzed. The TTS method was chosen because it appeared that twice the amount of type over manually operated equipment could be secured.

Operators were made aware of the contemplated installation over a several-month period. "This," he said, "constituted a sort of softening up period. . . . In this way, receptivity of the new method by employees was due to management preparation. In addition, experi-

Speakers at Des Moines Research and Engineering Council Meeting

Seated left to right, Richard O'Brien, vice president, Graphco, Inc., Neenah, Wis.; Richard Rooney, plant superintendent, Western Printing & Litho Co., Hannibal, Mo.; Louis Bowen, secretary-treasurer, Superior Type, Inc., Atlanta, Ga.; C. M. (Larry) Flint, vice president, Chas. T. Main, Inc., Boston. Standing: William C. Hagan, composing room superintendent, Kingsport Press, Inc., Kingsport, Tenn.; George H. Harper, superintendent, Maclean-Hunter Publishing Co., Toronto, Can.; Joseph H. Kuney, assistant to director of publications, American Chemical Society, Washington, D.C.

In picture at right, seated left to right, are Charles Cook, in charge of technical procedures, Haynes Lithograph Co., Rockville, Md.; Dr. William C. Walker, vice president, West Virginia Pulp and Paper Co., Williamsburg, Pa.; Paul Lyle, operational superintendent, Western Div., Western Printing and Litho Co., Racine, Wis. Standing: Edd Shipley, assistant to production manager, Kingsport Press, Inc., Kingsport, Tenn.; William E. Ward III, vice president, Baird-Ward Printing Co., Nashville, Tenn. These men reported on new processes and equipment used in their plants.

enced operators and other factors softened shock of the transition."

Actual production began in January 1960 with one tape perforator and one TTS Model 20 Linotype.

Harper stressed the fact that without good machine maintenance from the start, TTS operation will fail.

A second Model 20 was installed a month later. It was found that an average production of 10 lines per min. on the casting machines furnished best over-all production.

Harper asserted that matrix damage and distributor stops were less than on manually operated machines. Continuity of TTS operation is better. The tape produced is cleaner than with manual operation, the average being one or two errors per galley. Since the tape perforators were isolated from the heat, and machine timing noises, errors have been reduced greatly.

After installation of the third TTS operated machine, the tape perforators average 400 lines per hr. Four tape perforators keep two casting machines busy on two shifts. In the Maclean Hunter plant, one monitor handles three TTS operated machines. The plant's regular linecasting machinists handle all maintenance work.

These men composed the Bindery Session panel at Des Moines Research and Engineering Council meeting. Left to right: John H. Tancill, assistant vice president manufacture, National Publishing Co., Washington, D.C.; John O. McCahon, chief engineer, The Smyth Manufacturing Co., Bloomfield, Conn.; Enoch Jones, vice president production, The Colonial Press, Clinton, Mass.

Cleantape Operation

William Lindsay, production manager, Louisville *Courier-Journal* and *Times*, described Photon's Cleantape operation as employed in his plant. The Cleantape is perforated by a typewriter-like keyboard with shifts and six-level punch. Lindsay stated the main feature of this equipment and method is simplification of keyboarding which permits drawing from a broader manpower base. The keyboard enables operation without skilled operators. With respect to the character width counting, Lindsay said the accumulation is accurate. "This is only an opinion," he added.

The Cleantype equipment is provided with a device for eliminating unwanted characters by back-spacing, automatic quadding of space matrices and can be set to insert thin spaces with the spacebands on the readout. The keyboard enables operation without skilled operators, Lindsay said.

At the *Courier-Journal* and *Times* three Cleantapes are fed into three Comet machines. Composition is 85% straight matter which is cast 8 pt. on an 11 pica slug.

Lindsay mentioned briefly tests made in his plant to determine whether operators are suited for keyboard work. Records are kept on charts by two men covering 10 working shifts per week. Lindsay feels that a standard of 375 lines per hr. on each of the perforators is a reasonable expectation.

He summed up the reason for keeping records by saying: "This brings up the point that unless you know what you are doing you can't tell what you're doing."

Producing Commercial Work

Use of the Intertype Monarch linecasting equipment in the Hannibal, Mo., plant of Western Printing and Litho Co., was described by Richard Rooney, plant superintendent. Seven Multiface tape perforators are employed. The Monarch equipment is operated at 14 lines per min.

The firm produces high school and college yearbooks with some commercial and book work.

In some of the work, production has been increased 15% over manual operation. In book work, he said, production has been increased 24% over manual operation.

Some of Rooney's machine maintenance comments were: The matrix assembler delivery belt is changed once a week as contrasted to seven months usage on manually operated machines. The spacebands are changed four times daily. Supplementing spaceband operation, an Ebonite spaceband lubricator is used.

Moderator William C. Hagan, composing room superintendent, Kingsport (Tenn.) Press, Inc., described production operation of Monotype's Monomatic keyboard and casting equipment. This equipment was installed in June 1960. Equipment is operated two shifts per day. Hagan reported that orientation of operators from old style to Monomatic equipment was no problem.

Hagan mentioned six operations necessary in doing composition with earlier equipment. To illustrate, he spoke of composition of a 221 page book. The type face combinations in one line consisted of three type faces with 8 pt. special characters. Composition for the book was produced in one operation with all the required characters set at the keyboard and then cast without making any changes in the matrix case.

Among the advantages also mentioned by Hagan were: (1) Great reduction, and in some cases, total elimination of caster operator's time-consuming job of changing matrices in the matrix cases, and (2) The facility of being able to set the job in one operation instead of setting "deadwood" because the newer style matrix case carries all of the characters called for in the job. This eliminates operator time allowance for subsequently cast characters to be inserted by hand, proof checking, etc.

Bugs Eliminated Early

The speaker reported that during the initial year of use it had been necessary to send for a service man three times. He also said a few small springs broke at unanticipated intervals. His summation was that the few bugs which were experienced in the equipment will be totally eliminated at an early date.

Graphco, Incorporated, Neenah, Wis., said vice president, Richard O'Brien, is strictly a Fotosetter plant. The company does business with advertising agencies and does some publication work. He thinks this type of equipment is to be regarded as another tool for offset work. In a plant such as Graphco the operators usually are converted from hot metal work. "This is an advantage," he said, "because they have typographic skill and experience."

Graphco stocks 22 type faces in sizes from 6 to 36 pt. "To duplicate these faces for hot metal composition, 350 magazines would be required," he said.

Some points brought out by O'Brien were: In photocomposition, white space is really set by the operator. Paging is done 100% from film. No paper is used. He feels it is best to stay within the first reproduction generation in order to come up with a sharp negative for the platemaker. With film reproduction of type faces, the tone or weight of the faces won't change especially from repetitive use. In ruling a form, the scribing is done on the soft side of the negative. In composing 36 pt. display faces, the work can be done as fast as with hot metal. O'Brien

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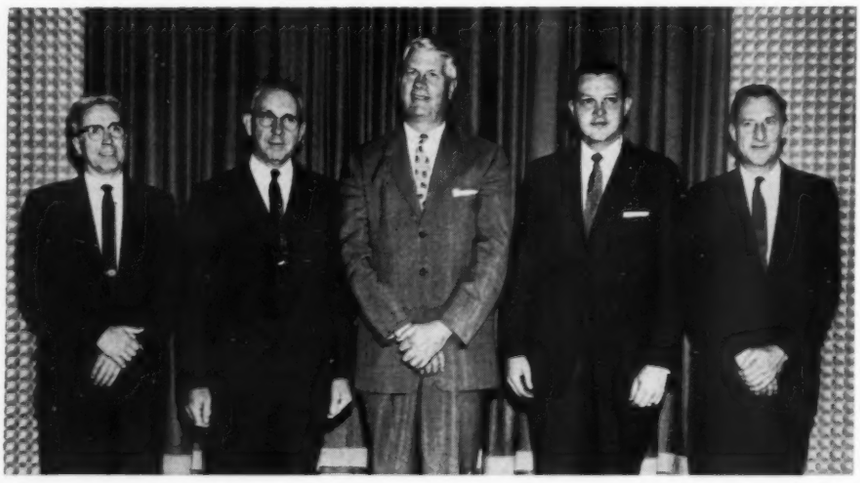


New officers of the Research and Engineering Council elected at the annual conference, Des Moines, Ia., May 22-24. Left to right: Second vice president, J. Russell Parrish, research director, Meredith Printing Co., Des Moines; first vice president, C. M. Flint, vice president, Charles T. Main, Inc.; president, Paul Lyle, operational superintendent, Western Printing & Litho Co., Racine, Wis.; treasurer, William E. Ward III, vice president, Baird-Ward Printing Co., Nashville, Tenn.; secretary, John O. McCahon, chief engineer, The Smyth Manufacturing Co.

In stereotype department of San Diego (Calif.) *Union-Tribune,* a molded packless mat is placed in Tri-Q Toaster preliminary to placing it in former which completes the drying operation previous to casting a plate.

Drying-Forming Important To Packless Mat Processing

By L. A. ALEXANDER, *Stereo Supt., San Diego (Calif)* Union-Tribune

WE have been using packless stereotype mats exclusively since April 1960. This objective was not achieved suddenly. Through gradual improvement in equipment and familiarity with the more rigid requirements in processing packless mats over a number of months, we became accustomed to their manipulation.

Packless mats are now pre-dried and formed in the average time of 4½ min. each using ⅞ in. shrinkage. In regular practice, up to 0.022 in. is retained in the plate of the original 0.035 in. depth in the form.

Initially, the recommended practices of the American Newspaper Publishers Assn. Research Institute and the packless mat manufacturers were the cause for great concern to us because of the specified tight tolerances.

During the initial usage of packless mats no major composing room problems were encountered. This was due to the excellent condition of equipment and our controls were sufficiently tight. Particular attention to condition of the rotary shaver was all that was required. Incidentally, at regular intervals the thickness of material shaved is checked and compared with the shaver's dial setting.

All flat cast material is shaved to 0.065 in. thickness, the same as zinc engravings, so that all material can be mounted on the same base in the form. We also control all open areas in photoengravings and flat casts to a minimum depth of 0.035 in. and retain at least 0.022 in. depth in the stereotype plate.

There is no hesitancy on our part in giving credit to the mat manufacturers for the consistently satisfactory condition and working properties of packless mats. We also feel packless mats are superior to their predecessors and in addition are much softer.

In our case, the most successful roller molding combination for packless mats is a 0.030 Nylon covered rubber sheet, a 0.025 in. steel plate, and a ⅛ in. Masonite type of board.

Some time ago, Charles Burdett modernized and rebuilt our Sta-Hi formers. The efficiency of the formers in drying and forming time was greatly improved. With the rebuilt machines our stereotypers were able to cope with the increased demands of the packless mat.

An important advance in processing packless mats, together with improvement in quality, occurred in January 1960 when we started testing a prototype Tri-Q Toaster. This machine was a means for going completely to packless mat operation in our plant. The mat is preshrunk in a flat state and emerges from the machine in a flat state—an important factor in packless mat operation.

The addition of the new Toaster also reduced the workload of the formers. The formers form and dry the mats without warpages or buckles. The mats are so flat that they actually snap as they are seated to the vacuum plate in the former.

We now operate three formers and two Toasters. Now, the time required to process a mat is 2¼ min. in the former and 2 min. in the Toaster.

Only a minimum number of alterations were necessary in other equipment to effect the changeover to packless mats. The bolster supports on the Pony Autoplate clips were milled off. The height of the ring gauge was cut to permit fitting of the packless mat.

Keep Core Aligned

It is also important to keep the core in alignment with the back of the casting box. The thin rib structure which results on the plate when the thicker packless mats are used will cause shaving and press troubles. In some cases, it may be necessary to deepen the grooves 0.010 in. We have not done this and don't expect to have any trouble so long as the core stays in alignment.

During the initial period of packless mat usage it was found important to keep the inking rollers set properly on the press and to use a fairly hard blanket.

Equipment and processing controls must be tightened in all departments to enjoy the advantages of the packless mat.

The advantages are well worth the effort. We are now printing much better halftones and our ROP color is noticeably improved. We get away to faster starts on editions and—we have eliminated many superstitions about packless mats. ⊕

NPEA Offices Moved

Offices of the National Printing Equipment Assn. have been moved from present quarters to Room 914, 509 Madison Ave., New York 22, N.Y. The telephone number is MUrray Hill 8-1010.

How to Evaluate Proposed Change to Offset Printed Newspapers

By **HERBERT E. PHILLIPS,** *Assistant Head, Graphic Arts Research Dept., Rochester Institute of Technology*

THE growth of web offset in the industry is a progressive conversion from one way of doing a job to a new way—from one system to a completely different one. In some cases it has meant the establishment of a new department in an existing plant. It has also been the prime reason for erecting new buildings with all new equipment manned by people who, a few months ago or perhaps just yesterday, performed a different kind of job.

Letterpress pressmen, stereotypers, engravers, and other craftsmen now perform new and different duties. A new language has been learned. Pasteup, proof press, reproduction proof, prescreened copy, platemaking and web presswork have been added to the vocabulary for designating the new tools. Time schedules have been changed as some operations were dropped and others took their place.

Analyze Process Changeover

As is customary in making a change of such magnitude, the publisher consults with his management assistants, the editor and production department foremen regarding all facets of the proposed new operation. The team discusses equipment purchases, capacity, cost, time schedule, supplies to buy, and how to schedule various plant operations. There is also discussion regarding the number of employees to be retained, who needs retraining, and where the education and advice can be obtained.

In evaluating the proposed printing of a newspaper by offset many details regarding each phase of the operation must be considered. These concern the best methods to use, the size and kind of equipment to buy for each step of the process, and what employees are needed to carry on the operations successfully.

The following kinds of questions are often asked as if there was only one correct answer: What camera is most suitable? What method is best? Is hot type less

R. BURANDT

2 OFFSET PRINTED NEWSPAPERS

Differences in production procedures—Type composition, halftone illustrations, page pasteups, camera work—Employee training—Literature sources.

costly than cold type? What will the page cost be as compared with letterpress? There is no one answer to any one of the questions that can be applied to all plants.

In order to answer these questions one must first answer many more about the individual operation involved. Will the newspaper be completely tabloid with no larger sizes necessary or will standard size newspaper pages also be used? Will only black and white printing be done or will color too be desirable? Will the length of run be short such as many weeklies of 5000-15,000 or will circulations of 100,000 be printed too? Is the paper to make good use of offset's advantages and use many photographs and illustrations?

Considering some of these in detail, typesetting for example, we find several choices. Copy for offset consists of almost anything that can be photographed. If the material can be placed on the camera copyboard and a negative obtained from it good enough for platemaking, then it can be printed.

One system is to have all copy put together to make a complete page before it goes to camera for negative making. A common way to do this is to "pull a repro" of a page. In pulling a reproduction proof on a proof press enough care must be taken so that it is suitable for reproduction in the camera.

In many cases the page pasteup is made up of several fragmentary proofs representing different advertisements and individual pieces of copy printed on paper. It is common procedure to use clip books in which are printed illustrations, and frequently used borders, rules and signs which can be cut out and attached in proper position on the pasteup with the type reproductions.

Cold Type System also Used

In many cases the hot type system is abandoned completely when converting to offset, and sometimes the business is built up without any hot metal type involved at all. In this case, the camera copy is obtained directly from equipment such as the Justowriter or other automatic typewriters which produces the type image. Or copy may be produced by photographic means such as is done on the ATF typesetter, Fotosetter, Linofilm or Photon. The composed type characters are exposed onto photographic paper or film by a light source and then processed in conventional photographic chemicals.

The product produced from these methods is a piece of copy on paper that can be pasted up or otherwise assembled to form a complete page unit ready for the camera.

Many of the new jobs developed because of the switch to offset will be similar to the present letterpress jobs, but some are quite different with many "right" ways to accomplish the same goal.

Halftone Photo Treatment

Photographs and other continuous tone copy must be broken up into halftone copy. The screened halftone photograph can be made on paper as a positive and then pasted up along with the type copy and other line work on the reproduction proof. This method is commonly used and saves some time in the final camera work. It is, however, usually lower in quality, more difficult to copy, and contributes to some inconsistency in the appearance of the photographs.

The usual alternative is to cut black paper (or special red layout material) to the proper size and shape of the desired photograph. This material is then pasted up with the other elements onto the page proof ready for camera resulting in a clear "window" or opening in the page negative.

The halftone negative is made from the photograph and then stripped into place over the open window provided. This system allows for more control over the tone differences in the halftone and makes the camera work of the page proof less critical. The halftone negative is

usually made on special thin base film so that the resulting negatives all lie as flat as possible and in good contact with the plate during plate exposure.

A continuous tone photographic image must be converted to a halftone image made up of dots as with the letterpress process. The cameraman can use the glass screen as common in engraving, or switch to the magenta contact screen as often used now for lithography.

The magenta screen is a photographically produced halftone image on film which is then dyed a magenta color. The purpose of the color and the special dot formation in the screen is for control of tone differences in the photograph. The screen is placed over the high contrast film to be used and proper exposure given to obtain the desired characteristics in the halftone negative. The negative will have finer dots than newspaper letterpress due to use of 100 to 150 line screens.

The per cent dot retained to print the highlight areas will be made much smaller than the corresponding value in an engraving negative. The offset dot changes very little through the platemaking process. The engraving highlight dot in the negative is enlarged so as to compensate for the loss of dot diameter in the chemical etching of the printing plate. The result obtainable with offset can be a finer dot with areas of blank white paper used to obtain crisp, white highlights. Also of advantage is the ability to print large solid areas and complete solids in the shadows of photographs. This makes possible good control of tone values and tonal separation.

These halftone characteristics along with the greater ink density possible in printing by offset result in the crisp and clean halftones that have given offset reputation for quality reproduction.

Technical Improvements

In some parts of the craft lithography has changed so much that operations are comparatively simplified. This has happened in the platemaking operation. For short run applications such as for most newspapers, presensitized plates or wipe-on plates, prove to be adequate.

To prepare halftone negatives for offset a contact screen usually is used. The contact screen is placed over the film in the camera and held in place during exposure by the same vacuum that hold the photographic film. Negatives produced in this way coupled with the offset platemaking methods provide a dependable reproduction system because of the common photographic controls used and the greater ease in judging results.

The employee performing these operations does well with little experience after proper techniques are taught.

Presensitized plate processing techniques are relatively simple. These plates are not influenced by humidity changes as some plates are, only one or two chemicals involved are in most cases, and these chemicals are supplied ready to use.

The complications of graining metal, all the chemical cleaning steps involved, pre-etch, post-etch, mixing of light sensitive coatings, the effort to coat the plate evenly, and many other detailed procedures all can now be avoided.

Problems Yet to Be Solved

It is common practice for the printing and publishing industry to tolerate inefficient operation and live with small bothersome problems for extensive periods. Information passes from one publisher to another at conventions, by personal contact, and by sales representatives visiting various plants.

These procedures are followed in the web offset commercial printing field as illustrated by the panel discussions each year looking for the solutions to many problems common to the industry. Many of these problems could and should be solved by more serious interest in web offset research. The industry passes up the opportunity year after year as the problems mount. In some cases the problems are solved at great expense of time and money to individual companies.

One of the most serious technical problems confronting the web offset newspaper publishing effort is the difficulty with newsprint. Newsprint is prone to fluffing, or linting. Most supplies are inferior for today's operation and quite impossible for operations expected in the near future. The release of particles from the newsprint to the printing blanket, plate and ink train is a serious problem.

Newsprint is a mass produced product. It is also one of the lowest cost printing papers available. It is not designed for offset use. If over 95% of it is used for letterpress printing, then can any company afford to supply anything different for web offset? The answer from some companies has been a reluctant "yes."

For many years the anticipated need has been ignored. In the paper industry it is common to wait until the need is present before developing a suitable product instead of anticipating its need.

The present newsprint usually is for use on presses without flying splice equipment. Most of the printing is with black ink only or single spot colors with very little full process color being printed. The quality accepted is often far below the capabilities of the system. Under these conditions three or four rolls of paper can be run and then press washups are necessary.

The solution to the problem is complex because conditions and supplies vary so greatly in various plants, the relationships between paper, ink, and the printing process are difficult to study while production continues. Capable personnel are not available in production shops to make the necessary studies.

Specific Training Needed

As the web offset growth continues in the newspaper publication field, employees so far as possible must be retrained to perform various craft operations. The choice is either to retrain one's own personnel or hire new employees. From where can capable web offset pressmen be hired? There is no surplus! The growth of web offset has been rapid in the regular commercial printing fields too, and with some of the same problems to solve.

Experience has shown, as discussed at the Web Offset Section PIA meeting (see PRINTING PRODUCTION, May 1961) that a printer with a new web offset press either has to steal his press crew by hiring them away from some other shop or train his own crew. A second crew for a second press is usually obtained by splitting up the first crew and adding new members to both.

continued on page 60

PRINTING PRODUCTION's OVERSEAS' REPORT

Projector for Aligning Monotype

AN improved model of the Patra-Enbeeco type alignment projector has been announced by the Printing, Packaging & Allied Trades Research Assn. of England. The projector is designed to provide a quick and accurate check on the alignment of Monotype characters on the type body and was first introduced in October of 1959.

The projector is said to offer a means of eliminating errors in alignment. Measurements from the projector can be transferred either visually or audibly to the caster so that all newly cast type will be in spot-on alignment with type already in use.

Because the matrix case of a Monotype caster is adjustable in stages of 0.0002 in., the projector has been constructed to check alignment in steps of the same amount. The alignment error indicated by the projector can be transferred quickly to the caster because both are adjusted by a control which clicks for each step.

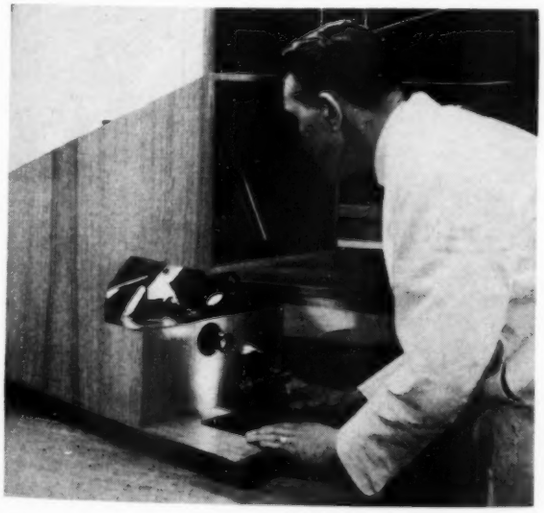
Uses Screen Images

The projector works on much the same principle as an epidiascope: The type face (normally a capital H) is placed with the appropriate Monotype slip gauge (or an old character—say another capital H—from type of the same size already in use) on the type carrier provided. The carrier is then placed on the illuminated stage of the projector, and 20X images of the new type face and the slip gauge appear side by side on the screen.

A micrometer wheel beneath the stage is set and the image raised or lowered so that the edge of the slip gauge can be made to coincide with the datum line engraved on the screen. In the new model, this datum line is illuminated, greatly facilitating use of the instrument. If the type face does not also coincide with the datum line, it is out of alignment. The error is determined by re-adjusting the stage so that the edge of the type face is brought onto the datum line.

The difference between the two settings is read off the micrometer wheel or counted by the number of clicks. The Monotype caster adjustment is then corrected by the same number of clicks. Thereafter, all further castings are aligned.

Illumination of the datum line is achieved by a light positioned over the top of the glass screen so that the engraved line appears green by refraction. This, together with the hood, enables the projector to be used anywhere in the plant—no matter what type of lighting there is.



A technician peers into the improved Patra-Enbeeco type projector to check alignment of Monotype characters. Characters are aligned with a datum line on the screen; the line is illuminated in the improved model.

An illustrated leaflet giving particulars of the type alignment projector may be obtained from Printing, Packaging & Allied Trades Research Assn., Patra House, Randalls Road, Leatherhead, Surrey, England. ⊕

Follow Copy

(CONTINUED FROM PAGE 33)

a boon to agency personnel if the printer was made responsible for spotting and making corrections.

A real heavyweight of the industrial world joins the "yes, but" group when United States Steel's director of advertising, John Veckly, okays the correcting of grammar and spelling if the printer is sure the unusual spelling was not used on purpose. But punctuation, he feels, should be left alone because the printer may not know how the client wants the copy punctuated.

A high percentage of those questioned specified obvious errors as those to which they think the printer should limit himself. But what is obvious to one individual may not be evident to another. Some people couldn't tell the difference between a split infinitive and a severed artery or a dangling participle from a hangnail.

It remained for probably the smallest agency contacted, the Charles E. Yost Advertising Agency, to point out the difficulty of defining obvious.

"Certainly if copy read 'Pensylvania' it should be changed," he says. "But if it read 'New York City' it probably shouldn't be changed even though 'City of New York' is the correct form."

The last advocate of the "sometimes" theory, the William G. Johnston Co., has been in the printing business since 1818. It believes there are two kinds of responsibility involved, legal and moral.

H. M. Fritz, president of the company, believes that printers are legally responsible only for reproducing copy exactly as furnished, or as finally okayed by the customer.

"Morally, I think we should go much further," he continues. "Obvious errors such as misspelled words, glaring mistakes in punctuation and the like, should be taken

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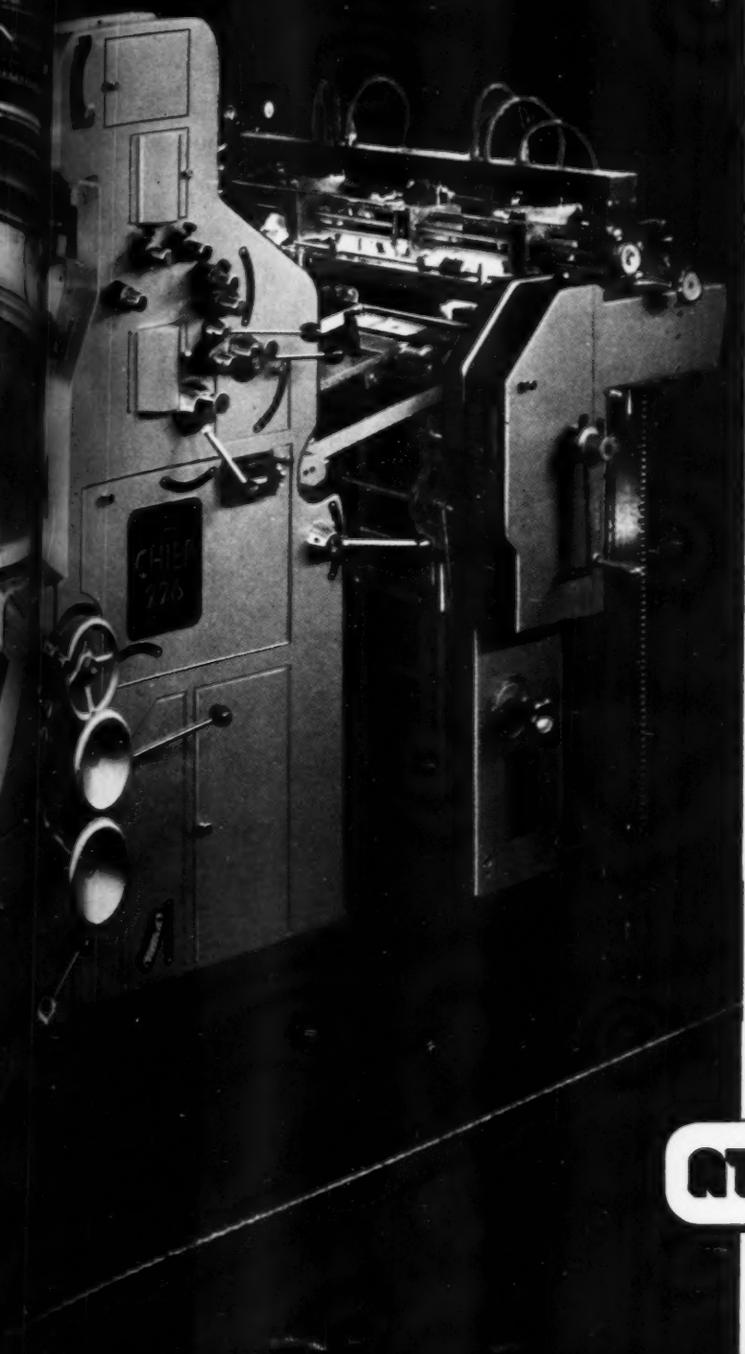
THE NEW ATF CHIEF 226



the 20 x 26" offset press which prints two colors at speeds up to 8500 sheets per hour (17000 impressions)

This new ATF Chief 226 is the two-color offset press designed specifically to produce high quality printing with minimum operator effort on the most common job sizes — from multiples of 5½ x 8½" to a full 20 x 26½". Its operating simplicity and high speed combine to give you maximum profits on multi-color work. Here are some of the advantages:

- 8-up production of 5½ x 8½" and 6 x 9"; 4-up on 8½ x 11" and 9 x 12"; 2-up on 11 x 17" and 12 x 18"; 1-up on 17 x 22", 18 x 24", 19 x 25" and 20 x 26"
- Speeds up to 8500 sheets per hour (17000 impressions) on stock from 9 lb. onionskin to .030" card
- Full bleed on any job up to 19⅝ x 26"
- Lower plate and makeready costs, plus faster production than larger presses. The Chief 226 can produce short and medium runs more economically than a 25 x 38" two-color, for example
- Pressman can make ready at slow speed and increase to running speed without losing register, with the ATF swing arm gripper construction
- Register on second color unit adjustable in both directions from the operator's side — while running
- High pile delivery and double-loading stream feeder help keep downtime to a minimum
- ATF pyramid inking systems insure even flow of ink to all four form rollers on each unit, permit running light vignettes to heavy solids with minimum effort
- Ink and dampener form rollers adjustable from outside press frame
- Precision-ground helical gears drive all cylinders, insure accuracy and long life

Many more advantages are yours with the ATF Chief 226. To find out how it can help you improve your competitive position in today's multi-color market, write for our free illustrated booklet.

ATF

AMERICAN TYPE FOUNDERS

Dept. W1, 200 Elmora Ave., Elizabeth, N. J.

ATF type faces used in this ad: Century Expanded with italics and News Gothic Condensed.

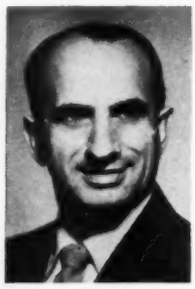
Public Printer to Keynote for Craftsmen

NEW frontiers for the Graphic Arts industries will be mapped out by James L. Harrison, U. S. Public printer, in his keynote address before the 42nd annual convention of the International Craftsmen's Assn., Aug. 6. The convention is to be held at the Palmer House, Chicago, Aug. 6-9.

General theme of the convention is *The Windy One in '61'*, and as an added feature, the Chicago Craftsmen's Club will be celebrating its 50th anniversary.

Plans for the various clinics and luncheons of the convention have been announced by Gradie Oakes,

EDGAR



IMPERIAL

convention chairman. President of the association is Robert M. Edgar, president, Neyhart Printing Co., Pittsburgh. Vice president is Michael Imperial, Skinner Kennedy Co., St. Louis, who is expected to be elected president for the coming year sometime during the convention.

The offset clinic will be held on the morning of Aug. 7 and continued in the afternoon following a club management luncheon.

During the offset clinic, the following topics will be discussed: A new approach to black and white and color, new developments in offset papers, the past and future of web offset, and web offset drying developments. Speakers are to be: J. Tom Morgan, president, Litho Krome Co., Columbus, Ga.; Harry R. Baldwin, Champion Paper & Fibre Co.; G. W. Bassett, vice president, Miehle Company, Div. Miehle-Goss-Dexter, Inc.; and B. Offen, president, B. Offen Co.

In session at the same time as the afternoon offset clinic will be a club management workship with G. R. LaVessar as chairman. Discussion will revolve around programming, delinquent members and collections and disbursements.

A wide range of topics from layout through procedure to the impact of photocomposition will be discussed during the typographic clinic scheduled for the evening of Aug. 7. Moderator is Howard N. King, Maple Press Co., York, Pa. Other subjects included on the program are type faces and typographic trends.

The bindery clinic is scheduled to run concurrently with the typographic clinic. Arthur E. Blumenthal, W. F. Hall Printing Co., Chicago, will serve as moderator of the clinic. Other speakers are: Allan B. Dry, W. F. Hall; Arthur S. Colton, Rand McNally Co., Conkey Division, Hammond, Ind.; E. H. Wolfe, Barrett Bindery Co., Chicago, and James B. Blaine, John F. Cuneo Co., Chicago.

To Visit Chicago Plants

On Aug. 8, the program is to be switched from one of clinical discussion to plant visits. Morning and afternoon trips are planned to W. F. Hall Printing Co. Half-day trips will also be made to numerous other Chicago plants featuring a wide range of processes and equipment.

On the final convention day, Aug. 9, the program will revert to clinical discussions dealing with letterpress operations. James E. Johnson is the moderator of the letterpress clinic.

Following are topics to be discussed during the letterpress clinic: *Must Letterpress Take a Back Seat*, by J. Russell Parrish, Meredith Publishing Co., Des Moines; *Wrap-Around Plate*, by Robert Downie, Marathon Div., American Can Co.; *Problems and Progress*, by Charles E. Wortman, Harris-Seybold Co.; *Level Impression Printing*, by W. H. Ticehurst, Curtis Publishing Co.; and *A New Approach—Flatbed Plus Wrap-Around*, by Kenneth DeSoto, Heidelberg Eastern, Inc.

A panel discussion is included in the letterpress clinic program.

Another event of the final day will be the Printing Week luncheon during which the 1961 poster and stamp contest awards will be presented. In charge of the luncheon is William H. Evans, Printing Week chairman.

OAKES

HARRISON

In addition to electing officers, sometime during the convention, three new members of the board of governors will be elected. At press time, the only announced candidate for the board was Louis Van Hanswyk, Lou Van Typographers, New York. He is a past president of the New York Club.

Supplymen's Guild to Meet

The 1961 convention of the International Printers Supplymen's Guild will be held at the Palmer House, Chicago, Aug. 5-6. Advance information from Francis J. Tominey, president, indicates a full program of business meetings for the two-day session. Registration will open at 9 a.m. on Saturday morning, followed by business and luncheon sessions. Two more sessions will be held Saturday afternoon and Sunday, with election of new officers scheduled for Sunday.

New NAPL Headquarters

The new headquarters of the National Assn. of Photo-Lithographers is located in the Herald Tribune Building, 230 W. 41st St., New York 36, N.Y.

Glamour of Web Offset Is No Reason for Use

WHILE web offset is gaining popularity by leaps and bounds, the work available should be the governing factor as to whether or not new equipment installation should be made. This was the statement made by Charles Cook, in charge of technical procedures at Haynes Lithograph Co., Rockville, Md., before the Des Moines meeting of the Research and Engineering Council held in May.

Cook also advised: "Do not allow the excess glamour of the new method to cloud your vision."

The speaker related experiences encountered at the time of installing a five unit 22 in. by 38 in. blanket to blanket web offset color printing press. Experiences following installation of the press were also related. The new press handles work that was formerly printed by sheetfed presses in the Haynes plant.

After six months operation, the speaker feels that color process work done on coated stock by the new press is equal to sheetfed work. He is still undecided respecting waste on the webfed press as compared to sheetfed printing.

He commented: "Any change in equipment must include cost of the equipment and installation costs, as well as costs for training press crews and paper waste incidental to initial stages of operation."

'Make Your Own Mistakes'

In humorous manner, Cook advised that those contemplating installing new webfed offset equipment should get the best advice ". . . and then go ahead and make your own mistakes."

Cost of the press including folder and silicon rectifier type of drive was $296 thousand. Additional equipment for the press consisted of a number of devices. Flying paster equipment was added to reduce press down time of 6 to 8 min. required to make a hand paster during a roll change.

Among the other items added were a long drier with two-side chill cylinder, electric eye to keep folder in compensation, stacking and bundling attachment, web cutting device, motorization of rolls and cylinders to save footwork and a device to keep water level constant at all times.

Costs of installing the new press not included in the cost of the press itself were related to power supply lines together with numerous other circuits, gas and air lines, labor and materials expense, concrete press foundation and unloading riggers.

Total cost of the press itself with extra equipment and installation costs amounted to $491,500.

For one year's operation, the paper spoilage was estimated to average 15%. The speaker observed wryly: "It looks now as though we will wind up at 30%. . . . It also looks as though the estimated operating budget will run between $6 thousand and $8 thousand over the budget."

In answer to questions from the floor, Cook stated his firm is using copperized aluminum deep-etch plates on the webfed offset press for runs up to 250,000 impressions. The firm has standardized on 150 line screen for color process work.

In response to another question, Cook stated that on newsprint publication work paper waste has been held to 9%. In color process work on coated stock, however, the waste varies from 12% to 30%. He is unable to get an average as yet for one year's experience.

Offset Press Dampeners

Discussion about the Dahlgren dampening system and its effect on paper waste seemed to be extremely controversial. Michael Evans, Veritone Corporation, who was scheduled to relate his company's experience, could not be present at the Des Moines R & E Council conference. In the emergency, Charles Shapiro, Hopper Paper Co., Taylorville, Ill., was drafted to serve as moderator. Shapiro commented that as improved plates and materials were developed, dampening troubles on the press increased. Formerly with Lithographic Technical Foundation, Shapiro said that according to LTF laboratory tests less water reached the plates. In the

continued on page 87

WHAT'S AHEAD FOR THE READER

Ever hear of the Giants of Chicago? Certainly not in baseball, football or other sports—but *Printing Production's* August issue will feature a story on the "giants" of that city's printing industry. This will be included in a special feature section on *Printing in Chicago*, theme of next month's issue.

There will be many other interesting stories on this world capital of Graphic Arts. Look for them under these titles: *What is Happening in Chicago's Printing Industry, A New Printing Face for the Windy City's Industry* (newly-constructed plants), *What is Most Needed in Chicagoland Printing* (interviews with printers), *Litho Grows in Chicago, Millions of Specialty Products Pour Out of Chicago Plants, Massive Supply Center for the Graphic Arts,* and *What is Happening in the Chicago Printing Industry.*

The next issue will also include the final installment of the current *Offset Printed Newspapers* series. The author will show comparisons of screens and various kinds of type composition as they actually appear on newsprint by means of a specially printed insert.

In addition, there will be the regular features of each issue: News of the industry, Idea File of time saving tips, reports on the latest equipment, and other helpful information for production-minded executives. August will be another big value issue.

Offset Newspapers

(CONTINUED FROM PAGE 54)

There are several ways that in-plant training can be helpful. Equipment manufacturers and supply people can assist with their own products. In the larger well established printing plants special departments are employed.

The training material being prepared by the Lithographic Technical Foundation is unique. Necessary manuals for in-plant training are available so new members of a press crew can be taught from a professionally prepared lesson plan with visual aid material and reference material listed where possible. In this way, if the trainee cannot go to school the school goes to him.

Another form of in-plant training which Rochester Institute of Technology has found to be effective is on an individual consulting basis. A staff member is made available, for example, to work in the plant, on the plant's own equipment. He teaches the cameraman how to use the equipment and provides a sound understanding of the camera.

Those who take advantage of the short cuts and conveniences must be ready, too, to put up with some difficulties. The easy to make plates are easy to run on the press but easy to ruin also.

If pressmen are careless, pressures not set properly, press equipment out of adjustment or badly worn, then the otherwise very capable plate becomes a short run situation and can be worn out in a very few impressions. If the paper supply is not the best and the newsprint full of slitter dust and other material, build-up becomes heavy on the blankets, and the pressman doesn't stand a chance of obtaining the best and longest run from his plates.

All these details must be taught. How to recognize the cause of trouble and find one's way out fast is the problem. This kind of information is not obtainable from suppliers.

More reliable teaching is obtained from people trained in, and working at, the particular craft. It is important to obtain a basic understanding of the principles involved.

Two of the printing trades unions maintain instruction courses for training and retraining their members. These are the International Typographical Union and the Printing Pressmen and Assistants Union.

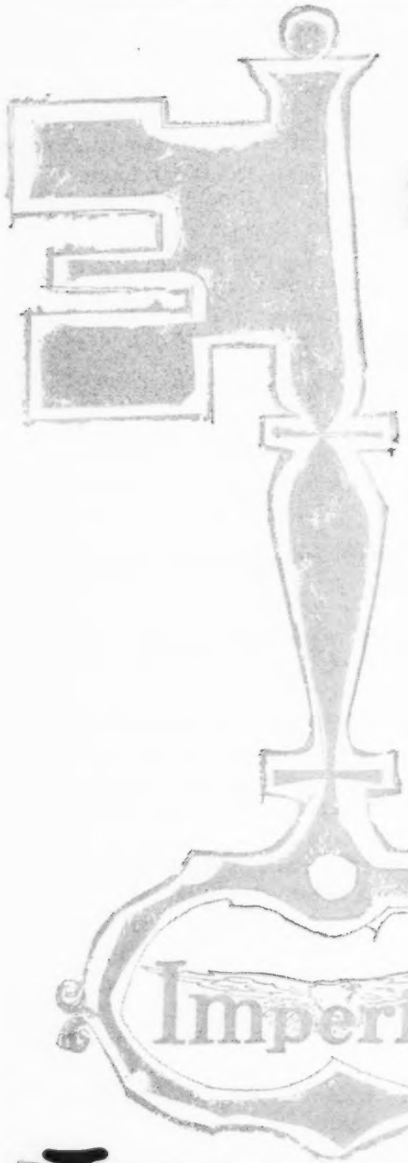
Administrative Training

The training of administrative personnel in the characteristics, limitations and problems of offset is equally important but different from the needs of the craftsmen. A familiarization with the complete system and a general understanding of times involved; methods used; equipment available; cost figures for equipment, supplies, and personnel must be obtained.

In order to assist those printing companies entering into web offset as well as the supply and equipment people directly associated with it, Rochester Institute of Technology has established a special web offset newspaper training program.

The course is conducted as a five day workshop on dates as arranged each month in the Graphic Arts Research Dept.'s web offset laboratory.

One of the difficulties encountered by people entering into a new field is finding sources of information and how to take advantage of these sources. Following are typical



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examples of printed material available. A more complete list (from which these were taken) including cost (some are free) and source for obtaining copies is available from Rochester Institute of Technology at no cost by requesting the *Book List* and *Graphic Arts Progress.*

A significant contribution by Lithographic Technical Foundation includes a series of shop manuals and basic texts for apprentices in lithography. Among these with well-worn covers on the library shelf are: *Halftone Photography for Lithography, Offset Platemaking, and Chemistry for Lithographers.*

No known reference books are available specifically on web offset newspaper publishing. But excellent books such as *Offset Lithography* by Bruce E. Tory contain fine information.

NEXT MONTH: The author presents a reprint of web offset printing on newsprint showing how the process performs using various kinds of type composition, halftones and color. Halftone screens will also be compared and there will be a discussion on how to use available conversion material.

25th Meeting for Pacific Papers

NEW processes will be accentuated at the silver anniversary meeting of the Pacific Newspaper Mechanical Conference to be held at Jack Tar Hotel, San Francisco, Sept. 8-10.

In response to member requests, much time during the composing room clinic will be devoted to a study of the merits of cold and hot composition, according to Harry Davidson, San Francisco *News-Call-Bulletin,* president of the conference.

Another area of interest at the conference will be the larger than ever display of new equipment and supplies. Vince Papanin, California Ink Co., reports unexpected demand for display space.

Prior to the official opening of the conference, a session will be held for business and production managers. During that time, the evaluation of new equipment and processes and selection and training of personnel will be discussed.

At 2 p.m. on the first day, the non-metropolitan session will meet to discuss the ANPA-RI offset seminar, web offset presses and cold type.

The composing room, pressroom and stereotype clinics will be held at 9:30 a.m., 1:30 p.m. and 3:30 p.m., respectively, on Sept. 9.

DAVIDSON

MAGGI

The final sessions for machinists, the mailroom and photoengraving departments will be held Sept. 10.

More conference information can be obtained from Edward Maggi, conference secretary, % Phillips and Van Orden, San Francisco.

Follow Copy

(CONTINUED FROM PAGE 55)

care of before the type is set, preferably by editing, but if necessary, by the typesetter himself."

Then there is the segment associated with the Graphic Arts which feels it is the printer's responsibility to make like knights in shining armor and go around righting wrongs. No one is perfect, they contend, but all can strive for perfection.

So much for theory. Now, what do the printers actually do and why do they do it? Furthermore, what are their qualifications for making competent judgments on the condition of copy?

Apprentices in the International Typographical Union must have a high school education or its equivalent. Presumably, they have studied English some ten or twelve years in primary and secondary schools. So they should come into the trade with a working knowledge of the language.

At any rate, in the printing lessons correspondence course all apprentices must complete before becoming journeymen, they are given a refresher course in grammar. Lesson five, "English for Printers," covers punctuation, spelling, sentence construction, parts of speech, the correct use of words and proofreading.

Thus, at the beginning of their careers, printers are impressed with the importance of these studies. Words become their stock in trade, grammar comes to be second nature. The subject matter varies from job to job so they are constantly learning something new.

Most, if not all, printers have a clean proof as a primary objective. Yet, they would prefer to set the job in what they consider to be the proper manner. But if setting it right will get them a dirty proof they'll set it wrong to get the clean one.

Getting a Clean Proof

What stands in the way of setting it right and getting a clean proof? Customer reaction, time element, company policy—but not necessarily in that order.

Some clients, as pointed out above, object to alteration of their copy. They accept full responsibility and want the copy followed. As a result, the human failings (often under extreme pressure) of copy writer, rewrite man or typist often find their way into print. A couple of bad proofs and the printer soon learns "that's the way they want it . . . that's the way they get it!"

Time element? It takes time to decipher some poorly constructed sentences. If the job is in a hurry (and which one isn't?) the printer will bang it out and get it on the presses.

Company policy, of necessity, is predicated on gross receipts. If the printer changes copy and the customer wants it the way he wrote it —cost of revision is on the printing firm. If the printer doesn't change it and the customer wants it changed —the customer pays and the company makes that much more on the job. But if the printer changes the copy and the customer likes the change—the customer gets a better job, less expensively, and the printing firm gets repeat orders.

Camera views of the ANPA-RI equipment show. (All names read from left to right.) 1—A. J. Gilson, assistant composing superintendent, Philadelphia *Evening Bulletin*, watches a demonstration of a vertical camera by H. J. Vogt, Kenro Graphics, Inc. 2—Everett Shaffstall, Shaffstall Equipment, Inc., describes his new electronic mat detector to Victor A. Tardue, production manager, Fargo (N.D.) *Forum*. 3—Visiting the *Printing Production* exhibit were Ralph Cranmer, executive vice presidnt, Williamsport (Pa.) *Grit*, and Edgar Mills, president, Eastern Newspaper Supply Co. 4—A bottom wrapper device for mailrooms holds the interest of Tom Whitlock, Wiretyer Corp., and Girt Cochrane, production manager, Charleston (W. Va.) *Gazette-Mail*.

ANPA Research Projects Active on Several Fronts

RESEARCH projects involving photoengraving, stereotyping and news ink used in the newspaper industry were discussed at last month's ANPA-RI Production Management Conference held in Chicago.

Special attention was given to the newly-developed Electrofax process by Frank Stanczak, assistant technical research director of the ANPA laboratories located in Easton, Pa.

Stanczak explained that the primary objective in developing Electrofax in cooperation with Radio Corporation of America, is to eliminate the photoengraver's negative in the preparation of a printing plate. This may be done for the letterpress, offset and dry offset platemaking processes.

The photosensitive element is a powdered zinc oxide photoconductor. When dispersed in a resin binder it can be used to coat practically any base from paper or plastics to a metallic sheet. This coating is insensitive to light until it has been electrically charged. It immediately attains usable photographic properties when an electrostatic charge is placed upon its surface.

During exposure, those areas of the Electrofax plate exposed to light lose their charge. The image areas which were protected from light retain their charge. By using developing materials called toners it is possible to develop the image areas. The large areas on the plate are made permanent by fusing in an electric or gas oven.

Stanczak reported upon field tests made in two daily newspaper plants. In one plant, several pieces of copy were processed and published in daily editions. The material processed was a film positive coming from the photocomposing machine.

"We have demonstrated," he continued, "that the Electrofax coating is resistant to the Dow etch process. Copy has been processed by contact printing from a film positive and by direct copy as a line shot in the process camera. In the latter instance, paper positives are placed on the copyboard and exposed directly onto Electrofax coated photoengraving metal."

Water Base Inks

A progress report regarding development and field tests in printing with water base inks was given by A. E. Yelmgren of ANPA's Easton (Pa.) research laboratories.

Field tests under actual production conditions appear to be encouraging. At the Allentown (Pa.) *Call-Chronicle* a two week test was conducted recently. The ink was used on a regular production schedule and represented over 3,000,000 pages printed with water base ink. Other papers conducting tests are the Boston *Globe* and the Washington (D.C.) *Evening Star*.

"A basic difficulty," reported Yelmgren, "preventing the widespread use of water base ink has been halftone fill-in. This is caused by excessive fibre accumulation on the plate and has been eliminated by the use of a brush in contact with the printing plate."

The speaker mentioned both rotary and stationary types of brushes used to prevent halftone fill-in. His conclusion was that the stationary type of brush must be improved. He also commented that considering the amount of ink laid down, the set-off was no worse than with conventional ink. The press former, in one test, appeared quite clean and the show-through was definitely less.

Another advantage in the use of water base ink is that the use of toxic and inflammable solvents are no longer necessary for press cleanup purposes. A bucket of water and a household detergent usually are sufficient for cleanup purposes.

Laboratory tests have shown that water base inks do not have any detrimental effects on press rollers.

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Photocomposition Interest Evident at ANPA-RI Conf.

THE importance of photocomposition and the stature it has gained in the newspaper industry was evident in the scope and content of a special session on this subject held during last month's ANPA-RI Production Management Conference at Chicago's Palmer House.

A. E. Rosene, St. Paul (Minn.) *Dispatch and Pioneer Press* production superintendent, stated that phototypesetting has a definite place in the industry but should not be regarded as a cure-all, nor can it economically produce all types of copy. "The approach to photocomposition must be based on cold, hard facts and nothing else," he added.

Rosene urged those contemplating a change to cold composition to proceed with caution. He stressed the importance of screening employees going into photocomposition departments as to work attitudes, hobbies, ability to type and interest in new developments. The new process and department should be thoroughly explained to all employees concerned with composition work. These people should also be encouraged in learning the typewriter keyboard and given the opportunity to demonstrate what they can do, he stated.

Photocomposition equipment was installed at the *Dispatch and Pioneer Press* in Nov. 1961 following fast etch installation in 1958 and the training of personnel in paste make-up through use of glossy proofs from hot metal.

Rosene stated that in less than a year as much as 34% of local retail lineage was being handled by this method at the *Dispatch and Pioneer Press*. First production figures were 1.66 hrs. per col. and are now at 1.14 col. per hr., he indicated. Total per sq. in. cost of engravings has been reduced from 10c before use of photocomposition to a present figure of .079c, the production superintendent added.

Photocomposition Panel

George P. Kunz, production manager, South Bend (Ind.) *Tribune*, Frank Marsteller, Allentown (Pa.) *Call-Chronicle*, and Don G. Scott, production manager, Spokane (Wash.) *Spokesman-Review* participated in a panel on photocomposition problems.

During the panel discussion it was stated that the choice of whether an ad would be set by hot or cold type should be made by the newspaper and not by the advertiser, unless specific charges were made for such a service. It was also indicated that service charges are made at some newspapers for Velox reverses used in cold type paste-up.

In moderating a panel discussion on photographic material, Kunz outlined the need for new materials to better accomplish photocomp operations. He asked manufacturers for materials and products which can be handled in a faster period of time and still give the same, if not better, results than products currently in use. The panel moderator felt it important that manufacturers be made aware of just what is needed and under what circumstances the products are to be used.

Kunz wondered if a specific type of photographic paper could be developed to meet the express needs of phototypesetting; a paper with the right thickness, proper emulsion, positive dimensional stability, fine reproduction quality as well as matching or bettering present darkroom processing time.

Manufacturers' representatives on the panel stated varied problems had to be overcome in meeting the requested requirements of the industry. One such problem is the stretching of double truck velox papers. To eliminate this stretching a standard drying procedure must be arrived at and the papers should not be over fixed as this results in shrinking.

ANPA Test Ad Report

Frank J. Burrell, assistant to the director, Mechanical and Services Div., ANPA Research Institute, New York City, reported on the ANPA test ad set by photocomposition, conventional hot metal, nonphotographic cold type and a new technique involving hot metal paste-up (see page 40, this issue).

Three different newspapers were selected to set the ad both by hot metal and by photocomposition up to the point where a mat was ready to be pulled. It was therefore possible to compare each photocomp operation to its equivalent hot metal operation. The particular ad selected for the test was done on the basis of pointing out the advantages of photocomposition for difficult ads and to test the skill and observe techniques in hot metal composing rooms by presenting an ad which could be handled in several different ways.

An ANPA Research Institute rep-

continued on page 88

One of the biggest groups from a single newspaper attending the ANPA-RI Conference were these production executives of the Des Moines *Register* and *Tribune*. Left to right are: William Dorriss, George Stiffler, William Boylan, Herman Fesenmeyer, Norman Miller, Tom Moore, Francis Agar, Charles Robinson, Harry Prugh, George Story, Warren Stremming, John Hetherington, and Maurice Sudkamp.

How New Equipment Works In Newspaper Production

IN-PLANT operating experiences following installation of newly developed production equipment were related by a number of newspaper production men at the ANPA Research Institute's Production Management Conference held in Chicago last month.

The reports were based on six months or more of operation. Universally, there seemed to be an adjustment or training period during which management gave the operating personnel time to become familiar with the equipment.

George Kunz, production manager, South Bend (Ind.) *Tribune*, reported on a five machine Monarch TTS tape operation during the better than six month experience period following installation. The machines are rated at 14 lines per min. production.

The speaker said: "Several weeks ago we decided we were ready to start making the necessary changes in copy cutting, routing copy through tape perforating room and in the manual assistance at the linecasting machines. We believe these operations will eliminate the major portion of tight tape waiting time and also eliminate the sometimes confused handling and correlating of copy with type.

Uses Allotting System

"Through the use of an alloter, it is possible for us to handle both our in-office perforated tape and also the wire service tape simultaneously on the five Monarch machines. Good perforator operators punch from 6½ to 8½ lines per min. at times. Therefore it is obvious that to keep a 14 line per min. machine in constant operation it is necessary to use an allotting system which, in effect, can shuttle the output of two perforators into one linecasting machine.

"It is also obvious that these high speed machines cannot produce 14 lines of type per min. on a galley unless there is a constant supply of TTS tape ahead of it at all times.

"With the Monarchs we find we need fewer linecasting machines to get our daily news and classified ad workload into type. Most of the time, our five Monarchs are producing the volume of type which was formerly produced by eight of the then high-speed machines.

"Many times, in the first 4 hrs. of the shift (7 to 11 a.m.), which is our peak copy load time before first edition lockup, these machines will produce from 2700 to 2800 lines of type. Many times, also, we have had hourly production figures of over 800 lines per hr."

Plate Marking System

An automatic plate marking system developed in the Los Angeles *Times* and *Mirror-News* plant, was described by Otis Booth, Jr., production manager. As the plates come off the automatic plate casting and finishing machine, an inked rubber plate cylinder marks the plates in letters and figures ½ in. in height. The figures are sufficiently visible for ready identification of location on the press.

No hand marking is employed in the operation. The speaker commented that only a dozen newspaper plants in the country would have sufficient volume of work to enable use of the device. Whether or not its use would be practical in a smaller plant remains to be seen. His plant, however, has recovered cost of the installation.

A report on the M.A.N. stereotype plate casting equipment installation was presented by Donald Newhouse, production manager of the Portland (Ore.) *Oregonian*. After some modification of the casting box, it is now possible to cast standard thickness plates from standard and packless mats. Also, after some modification of the casting parts, pinholes in the plate near the mouthpiece area have been eliminated. He observed, however, that time is saved in casting double truck pages on other machines.

One feature of the equipment mentioned by Newhouse is that at the end of the machine a slowly-revolving action of the plate occurs to permit visual inspection. The operator takes advantage of the slow revolving motion to paint the page number on the plate. He also said that casting is done at a metal temperature starting at 515 deg. F.; maximum temperature is 520 deg. and minimum is 510 deg. If there is trouble in any section of the machine, lights in a panel indicate location.

In answer to a question from the floor, the speaker feels it is practical to operate the equipment with one man.

By means of a movie, B. G. Burke, production manager, San Diego (Calif.) *Union* and *Tribune*, told of a newspaper bundle weighing device. The idea for development was borrowed from Betty Crocker (General Mills) where the contents of cake package mixes must be weighed exactly. As the bundled papers travel along the conveyor, they also pass under a machine called Selectrol. Those that are over or under proper count automatically receive a purple spray on the top wrapper. The incorrect weight bundles can then be brought to proper paper count before the bundles leave the mailing room.

Routine Color Plates

Harry Eybers, production manager, the Washington (D.C.) *Post*, presented an illustrated address on his plant's experience with the Vario-Klischograph which is used to separate and engrave color plates automatically. In general, he reported, the installation has been successful. Both spot and process color plates are produced on the equipment. He and his associates at the *Post* feel that the making of color plates should be done on a routine basis. Another benefit is elimination of the judgment of two or more color process engravers who may have differing opinions as to how the plates should be treated for color separation – the machine does it automatically.

In answer to a question from the floor, Eybers said the photoengravers union is the biggest booster of advancing technology in the printing industry. Eybers also showed reproductions of three-color plates, 11 in. by 13 in. size, which he said was done in 1 hr. time for each of the plates.

Dailies are in Color Trouble

A CHALLENGE to the newspaper industry to do better with ROP color reproduction and a vow by the production wing of the American Newspaper Publishers Assn. to do something about it were heard in Chicago last month.

The challenger, speaking at the ANPA-RI Production management Conference, was Dent Hassinger of the Chicago Bureau of Advertising, who urged better control of both color and registration, and continuous supervision.

Determined to do something about the poor showing by some newspapers in ROP color handling was the ANPA-RI Mechanical Committee which moved through its chairman, William Coddington, to establish a special color committee. The committee will function as a working group to help those newspapers which seek it in reproducing more acceptable color.

"It's time to grow up (in color)," said Hassinger, "because we are losing advertising revenue due to poor reproduction." He also charged that the time has passed when advertisers will overlook failure to match specified colors or keep color in register because ". . . color in newspapers is a novelty." He then went on to cite several examples of advertisers who have cancelled their ads because of unacceptable reproduction.

Hassinger called attention to the use of color in preprinted rolls and said the volume of this type of material will be 10 times as much this year as it was two years ago. He felt that this type of advertising takes money away from the newspaper which is in a position to deliver a page in full color at 55% to 60% of the price of a preprinted roll.

Hassinger also mentioned that newspaper ROP color is the fastest growing advertising medium today. The Hoe ROP Color Report shows total newspaper black and white linage down 6% but retail ROP color linage up 12% and national up 11%.

He suggested that publishers and business manager contribute more actively to producing better color. "They are in positions," he added, "to enthuse the whole team with the importance of color and of the opportunity it offers for business."

Acknowledging that the newspaper industry was in trouble on ROP color reproduction, Coddington, who is mechanical superintendent of the Detroit *Free Press*, pleaded with the production executives present to do something about the present quality of color.

He said that when a national advertiser sends out the same material for a color ad to a number of dailies and some print it badly, then ". . .we are all on a spot." He remarked that the newly-formed color committee will try to help anyone who needs help and asked newspapers to accept advice given by them.

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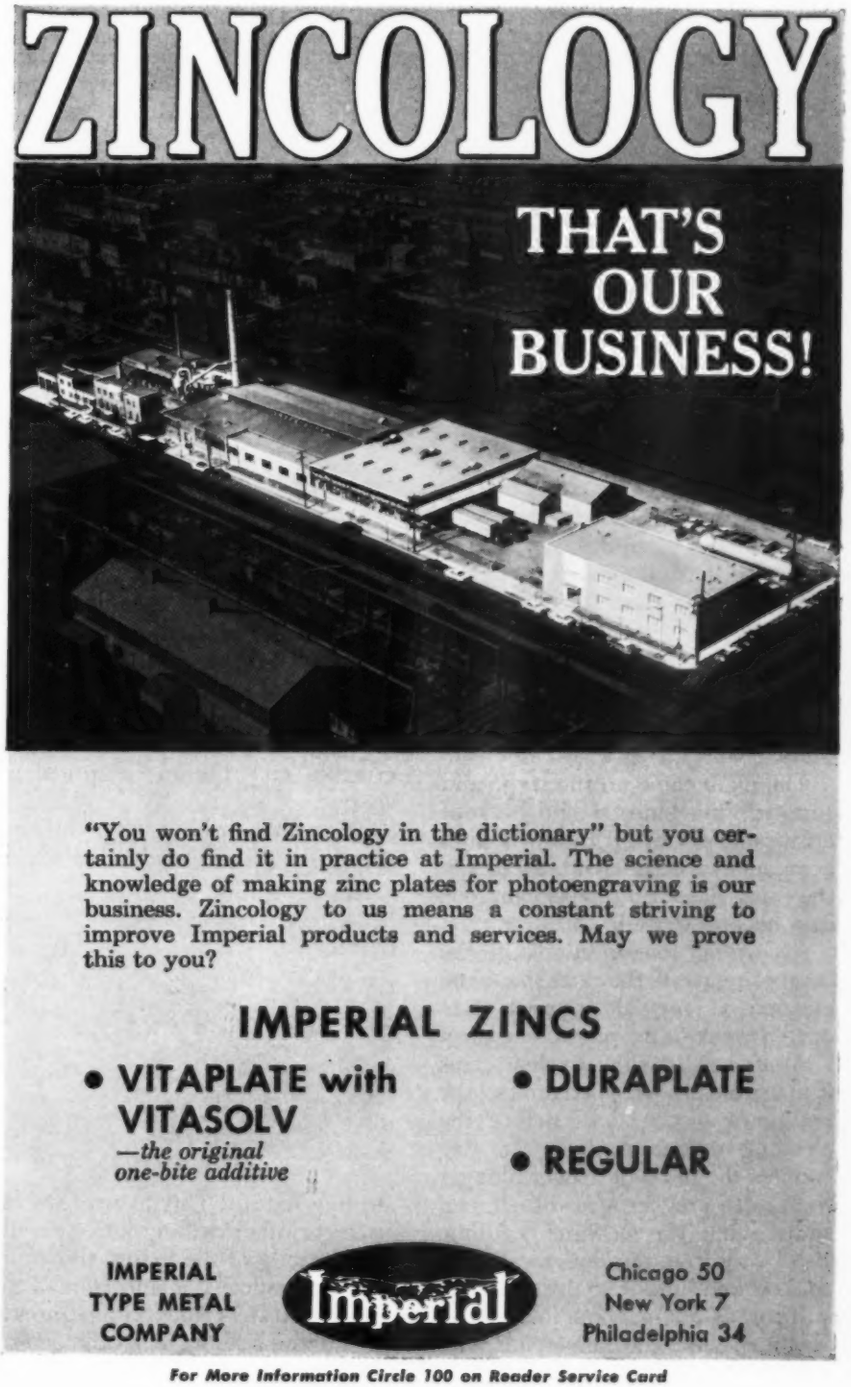
Radio hams in the printing industry are urged to participate in a roundtable on 75 meter wave length by contacting Dave Lewis (K1CBB). He also may be reached at 20 Bradley Park Dr., Hingham, Mass.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NO-SMEAR REGISTER MARK

Here is a helpful idea to aid artists in making overlays for the platemaking department. Instead of drawing the register mark on the acetate overlays, I cut lightly into (but not clear through) the acetate with a sharp knife. A little litho crayon is then rubbed into the cuts.

This assures an accurate and non-

smearing register mark for the platemaker. In our plant this type of register mark has eliminated many returns from the platemaking department.—*Art Jacobs, art department, Nazarine Publishing House, Kansas City, Mo.*

KEEPING MAIN CAMS CLEAN

The main came on Intertype and Linotype machines should be kept clean and dry at all times. If gum accumulates on the tread surfaces of the cams, the various lever cam rolls may become flatted.

According to conditions in the composing room, the cams should be cleaned at regular intervals, say once a week or every two weeks.

A safe way in which to clean cams is to use a cloth wrapped around the end of a wood stick. Before the cleaning operation, however, disconnect the pot pump lever plunger rod pin to prevent a possible metal squirt while the machine is idling.

Now saturate the cloth swab with coal oil and hold it against the cam surfaces as the machine idles. After cleaning, wipe the cam treads with a dry cloth. By using the wood stick there is no danger of getting the fingers caught accidentally. It is not necessary to use a lubricant, such as machine oil, on the cams—but do pay attention to proper lubrication of the justification lever cam rolls to avoid friction of the rolls against the cams.—*Don Lane, Scott Printing Co., Jersey City, N.J.*

FEEDING ONIONSKIN

If trouble is encountered when feeding onionskin or any lightweight paper on a Miehle Vertical press, try this: Cover all holes on the feeder shoes with Scotch tape. Then punch out one hole only in the tape. This will prevent the shoes picking up more than one sheet.—*Fred M. Olson, Austin, Tex.*

REMOVING DEVELOPING INK FROM LITHO PLATES

Instead of a flat pan for soaking litho plates free of developing ink, we now have a tank in which a number of plates can be placed.

We have built an upright tank that holds up to eight plates simultaneously. Wire racks were provided to hold individual plates. The racks slide between projections which are placed permanently at a slight angle.

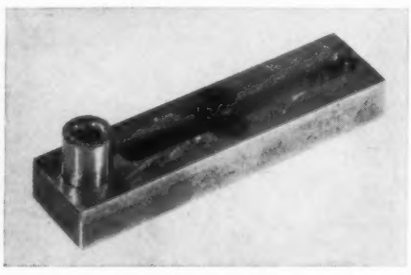
Water lines and drain are connected to the tank in such a way that temperature of the water can be controlled. With a little planning, a tank can be constructed to accommodate any number of plates.—*Martin E. Odell, Anderson, Ind.*

Removing Broken Screw Shanks

One of the mechanical problems encountered by the composing room machinist is in drilling out the broken threaded section of a Linotype metal pot mouthpiece screw.

Without some kind of drill fixture to locate the exact center of the broken section as well as a means for holding the drill centrally while drilling, the screw hole itself in the crucible may become elliptical in shape.

To enable drilling out a broken screw shank accurately, I made a



drilling fixture. This fixture can be used for other drilling jobs as well.

The body of the fixture shown in the illustration is made from ⅜ in. 10-20 mild steel stock. It measures 3 in. long by ¾ in. wide. At the end of the block there is a 13/32 in. hole. This is for reception of hardened steel drill guides which may be purchased at tool supply houses.

A slot, ¼ in. by 2 5/16 in. long, is milled clear through the block. Both the 13/32 in. drill guide hole and the ¼ in. slot are located on a center line. Automatic alignment horizontally with the broken screw takes place in most cases. The purpose of this will be apparent after reading the following explanation.

The slot provides a means for adjusting the drill guide hole centrally over the broken screw. The fixture body is held in place on the mouthpiece by a couple of F-65 mold fastening screws and flat washers. These can be turned into adjacent mouthpiece screw holes.

In centering the position of the drill guide, the 13/32 in. hole in the guide is first centered over the broken screw. The two F-65 screws holding the fixture to the mouthpiece are then tightened.

A hardened steel guide with No. 29 twist drill is inserted in the fixture. A check spot is drilled into the broken screw with a No. 29 high speed twist drill. The guide is then pulled out and the spot is checked

For the Reader

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for center. If the spot is off center slightly, the fixture itself can be tapped to bring the guide to dead center. Now check to see that the fixture holding screws are pulled up tight. Drilling out can best be done by next using another guide with No. 10 twist drill hole, finishing up the operation with a guide for No. 6 twist drill.

After removing the fixture the screw hole can be retapped with a ¼x24 hand tap.

If possible, wait until the pot has cooled before attempting the drilling job. Heat will not permit the drill to do best work. Have patience while retapping the drilled out hole, using plenty of oil on the drills and tap. Incidentally, coat the new mouthpiece screws with graphite paste when replacing the mouthpiece.—*James O. Austin, Newark, O.*

CONTROL BOX FOR PAPER

This easy method will control the stretch or shrinkage of paper being used during process color printing. Make a box of corrugated cardboard by taping the four sides and bottom together with strong gummed tape. For a 19 in. x 25 in. sheet, make the box 20 in. x 26 in.—and as deep as you wish (usually about 30 in.). After each color has been printed, invert the box and slip it over the printed stock until the next color goes on. We keep a supply of boxes on hand and use them to control the size of sheets and also to prevent the edges from curling, thus eliminating the possibility of wrinkling on the press.—*H. P. Bankston, Miami Post Pub. Co., Miami, Fla. Courtesy Kimberly-Clark Corp.*

Sheeting from Paper Rolls In Larger Printing Plant

THE primary urge to do in-plant sheeting from roll stock in larger plants is to realize economies and to make possible square dimension sheets, said Paul Lyle before the Des Moines meeting of the Research and Engineering Council held the latter part of May. Lyle is operational superintendent of Western Printing and Lithographing Co., Racine, Wis.

He was critical of paper mills and reported difficulties in securing square and accurate mill-cut sheets from mills.

Lyle stated a multiple roll (four roll) sheeting machine is in use at the company's Racine plant. Stock in roll form can be purchased from 2c to 3c per lb. less than sheets on skids.

Cost of the skid and top board make a skid weigh as much as 200 lbs. additional, which also increases freight charges. Freight amounts to as much as 6-2/3% with the weight of skid and top.

Sheeting Pros and Cons

Sheeting in the plant reduces inventory of sheet stock. Less storage space is required. Through in-plant sheeting facilities, roll stock can be used on sheet and webfed presses.

Possible disadvantages consist of a number of things: With in-plant sheeting there may be some disadvantage in getting uniform sheet length. This operation requires some skill. Sheeting from the roll should be done in an air conditioned pressroom with the same relative humidity as in the pressroom. Not all mills can make paper for in-plant sheeting. Unevenly wound rolls (larger at one end than the other) can cause sagging web in the press.

Additional advantages resulting from in-plant sheeting make it possible to give attention to spoilage on rim or core. Slime holes can be detected readily during the sheeting operation.

There are a number of other problems connected with ordering roll stock. One of these is the probability that when ordering 70 lb. stock you will get less sheets from the roll. There is also the problem of dust and dirt in sheeting and slitting. This must be watched closely. Just as is the case with any new venture experience is the best guide regarding operating precautions.

Answering a question from the floor, Lyle said Western's four roll sheeting operation is done in 1200 sq. ft. floor space. The speaker explained that the sheeter is operated at from 500 to 700 f.p.m.

Lyle also explained that sheet length is within less than 1/16 in. variation. Except on unevenly wound rolls this plant is now securing substantially accurate sheet length. Someone wanted to know how slime holes were eliminated during the sheeting operation. Lyle said obviously it is impossible for one sheeter operator to detect all slime holes on a four-ribbon sheeter. A man is stationed at the delivery end. He inserts a marker in the roll when a slime hole is detected. Obviously, however, one man can't detect all the spots in the four ribbons.

Lyle's concluding comment was: "The value of a sheeter installation in the smaller plant is doubful. However, if considering such installation, the situation should first be analyzed."

Roll-to-Sheet on the Press

Seven Miehle presses at Kingsport (Tenn.) Press are equipped with sheeters. In discussing the subject, Edd Shipley, assistant to the production manager, stated the reason for use of sheeting equipment on the presses is that his company, in doing work for customers, virtually has no control over quantity orders nor time limits. Consequently, Kingsport Press' capital investment in this equipment may not be suitable for other plants.

Shippley analyzed operation of the roll to sheet-fed perfecting presses. He stated that overall spoilage is only 1 to 1½% over sheeted stock. There is no extra handling of stock from the warehouse to the press.

Among those attending the recent TAGA meeting in Columbus, O. were, left: S. D. Oderman, vice-president, Sta-Hi Corporation; Erwin Jaffe, ANPA Research Institute; center: T. F. Fitzgerald, associate chemist, International Business Machines Corp., Lexington, Ky.; N. B. Kinley, plant superintendent, Reid Press, Ltd., Hamilton, Can.; right: representatives of E. I. duPont de Nemours, Phil Wheeler, printing technologist, Wilmington, Del., and Russell Johnson, process specialist, Philadelphia.

TAGA Speaker

(CONTINUED FROM PAGE 43)

plates. Smooth sidewalls and a reduction in image undercutting results in powderless etched plates molding well in electrotyping. Other advantages indicated were improved halftone rendition and greater production efficiency of etching plates in much less time.

Borth stated that the ultimate goal of development work on powderless etching must be a process to permit etching of combination line and halftone plates by a single bath which will produce results that are superior to those available from present materials.

New Letterpress Plates

New flexible duplicate letterpress plates based on a thermosetting liquid polymer system were described and compared with rubber plates by Norman G. Tompkins, Graphic Arts Research Dept., W. R. Grace & Co., Dewey and Almy Chemical Div. in his paper on molding high durometer flexible plates from a thermosetting liquid polymer system.

Advantages of the thermosetting liquid plates are that they require less makeready, may be wrapped around rotary presses and may be used for preproofing on an auxiliary proof press while the plate is attached to the tympan. They can also be molded harder than rubber plates; however, they must be cooled after molding to eliminate distortion when being removed from the mold.

Use of flexible plates on presses designed for their use results in a cost saving, Tompkins said. Savings are affected from lower cost of the plate itself in materials, labor and use of equipment. Reduced makeready time of the plate on the press renders both press and pressman more efficient.

Tompkins stated that plates of this type seem to give a combination of mold fidelity, flexibility, hardness and freedom from thermoplastic flow difficult to match in other plastics. When the plates are modified by molding a thin, hard plastic layer on the printing surface, reproduction of fine detail is further improved, he added. Practical printing of halftones from flexible plates then becomes possible. Reproduction from such plates has very near the tonal range and contrast of the original.

Long runs have not been attempted so that life of such a plate has not been determined. However, in type and line work, plates made from the thermosetting liquid material have been run from 300,000 to 400,000 impressions before showing objectionable wear, Tompkins indicated. This figure is expected to increase on plates with the hard surface film.

In measuring dot width and length in relation to increased impression the speaker stated that rubber plates showed a more rapid rate of increase than either the pure thermosetting liquid plates or the liquid plate with the hardened surface. Also, the thermosetting liquid material having the hardened surface showed the smallest rate of increase.

In a question period following his presentation, Tompkins said that shrinkage of from 2 to 2½% in the plates occurs in molding and that molding temperature should remain constant so that shrinkage will remain consistant.

Stereo Printing

The principles of three dimensional printing were given by James M. Dugan, project engineer, Battelle Memorial Institute, Columbus, O., from a paper with the imposing title of the principles of parallax autostereopsis printing and presentation.

Dugan said that this form of three dimensional printing will find increasing use as it provides the only method of stereo presentation that may be used without a separate viewing aid. Important applications in the printing field will include the manufacture of greeting cards and impact printing in packaging, he added.

This method differs from the other forms of stereo presentation–the Polaroid system and the Anaglyph method–both in taking the stereographic pair of photographs and in viewing the printed image, Dugan stated. The method is based on use of a lenticular screen which is used to delineate the picture when the photograph is being made and to divert the image to the proper eye when the image is being viewed.

The speaker indicated that any method of printing–letterpress, gravure or lithography–may be used to reproduce the stereograms for this system. Color printing or presentation is excellent with this method of presentation. In printing, the usual color separation methods are followed and care in registration of color prints is required. ⊕

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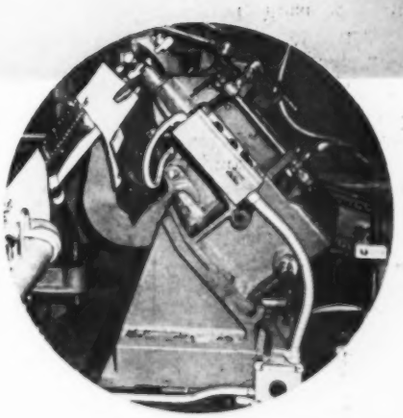

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EQUIPMENT AND SUPPLIES

You may easily and quickly obtain additional information on the new equipment, supplies and services mentioned on these pages by completing the special Reader Service Card conveniently found in this issue.

OFFSET PAPER PLATES MADE BY PHOTO COPYING MACHINE

A new method of making paper plates for offset duplicating by use of a Thermo-Fax copying machine has been announced by Minnesota Mining

and Mfg. Co. According to the company, plates are made by a completely dry process, using the same techniques as in copying any document. Total time involved is not over 30 sec. with cost per press ready plate as little as 12 cents, 3M states.

The plate is said to be ready for the press in two, four second steps in which the image is copied from the original document to an intermediate sheet and then to the paper plate. The announcement said the plate will absorb punishment, is not affected by light and is not sensitive to finger marks when handled. CIRCLE NO. 263 ON READER SERVICE CARD.

STEEL GALLEY CABINETS

American Printing Equipment & Supply Co. has announced the introduction of a new line of printers' galleys and galley cabinets. Made of heavy gauge steel, the cabinets are welded throughout to make one unit. Cabinets are finished in hammertone grey and are marked in number strips. CIRCLE NO. 290 ON READER SERVICE CARD.

CERAMIC INFRARED HEATERS

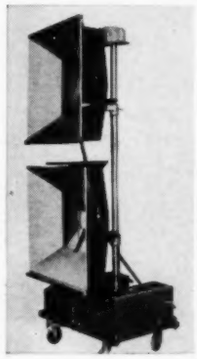
Ceramic infrared heaters for the printing industry have been made available in the United States by Roundout Marketing Associates, Inc. Manufactured by Elstein, the heaters are available in sizes of 150 W., 250 W., 400 W., 650 W. and 1000 W.

The heaters are said to have an average life of more than 10,000 operating hours. The ceramic finish is said to resist chemical corrosion and protects the element wire against oxidation. CIRCLE NO. 272 ON READER SERVICE CARD.

Imperial Type Metal Co. is marketing a combination camera and processing unit which is said to produce black and white line copy of any length automatically.

nuArc LAMPS FOR LARGE CAMERAS AND COPYBOARDS

nuArc Company, Inc., has announced a new line of double deck arc lamps. Designed for use with large cameras and oversize copyboards, the lamps reportedly provide even light over the entire copy area. Incorporated in the lamps is nuArc's magnetic amplifier mechanism which is said to control automatically the feed of carbons, assuring correct gap at all times during the burn. The double deck lamps are motor driven and are available in floor or carrier type. CIRCLE NO. 279 ON READER SERVICE CARD.



CAMERA-PROCESSOR HANDLES LINE COPY AUTOMATICALLY

An automatic and continuous camera and processing unit for handling black and white line copy has been announced by Imperial Type Metal Co. Manufactured by Reproduction Equipment Co., the unit operates strictly on photographic principles and is said to have applications in the newspaper, offset and book publishing fields. It is recommended for use by plants having a large volume of black and white line copy (pasteups, typewritten pages, black and white art work and ruled form work).

Reportedly, the machine is automatic with the exception of the feeding operation. One operator can achieve a reported rate of 700 letter-size prints or 180 newspaper size pages per hr. A group of two column, three column or less than page size ads can be assembled side by side and run through the camera at one time.

According to the distributor, material of any length and up to 18 in. wide can be handled on the combination unit.

The equipment will reproduce from either transparent or opaque originals any material on flat sheets. It is electrically interlocked for protection

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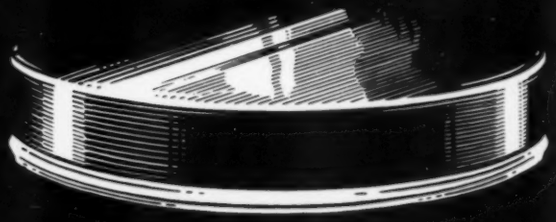

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against operator error and is indexed to allow the reproduction to be placed on the edge of the sensitized material, thereby eliminating edge trimming when the material is the same width as the reproduction.

The standard unit is set to reproduce at same size or half size. However, cameras can be furnished to reproduce at other enlargements or reductions.

Loading is accomplished by pulling the leading end of the sensitized material across the top of the unit and inserting the submerging rolls. The material is automatically threaded through the five processing tanks and the drier, and then pulled into loading position at the end of a production run. Tanks and rollers are color coded to prevent contamination by error.

The drier utilizes infrared energy and may be used with all types of photocopy papers. All equipment parts in contact with chemicals are non-corrosive, and the frame is plastic coated. No permanent plumbing is required.

In operation of the camera, the operator feeds original copy between a pair of guides into the feed head. The head carries the copy past a light source, and the light is reflected to a slit aperture to assure sharp negatives and positives. The sensitized paper or other material is moved past the aperture at a speed synchronized with that of the original copy. The sensitized material then passes to the developing tank of the processor unit.

The finished prints are wound on a rewind roll. They are made at a speed of 6 ft. per min. It is not necessary to expose a full roll of sensitized material at any one time. Any amount from 8 ft. to 1000 ft. can be used. Partial rolls can be removed and reloaded, allowing changes of types of material without waste.

Both litho type film and photocopy paper may be used in the photocopy camera-processor unit. CIRCLE NO. 282 ON READER SERVICE CARD.

THREE NEW COVER SIZES

Three new stock sizes of Carolina coated cover have been added to Riegel's line of printing papers. The sizes, all grain long and in both 10 and 12 point, are: 20 in. by 26 in., 23 in. by 29 in., and 35 in. by 46 in. CIRCLE NO. 273 ON READER SERVICE CARD.

SOLUTIONS IN 5 GAL. DRUMS

Varn Products Co., Inc. is now offering its line of printing and lithographic washes, solvents and non-offset spray solutions in 5 gal. drums. The new drums have polyethylene pullout spouts to facilitate pouring. Polyethylene spigots are available to convert the drum to a horizontal dispensing storage unit. CIRCLE NO. 259 ON READER SERVICE CARD.

ADDRESSING MACHINE USES TYPEWRITER STENCIL PLATE

An electric addressing machine that prints from stencil plates made on a typewriter has been announced by Nord Photocopy & Electronics Corp. Known as the Nordamatic Addressor, the machine reportedly can produce 10,000 impressions from a stencil plate and operate at speeds up to 3600 addresses per hr.

Two features of the equipment are an automatic adjustment for the thickness of material being printed and an automatic provision for isolating the inking roller when the printing cycle has been completed. The latter feature prevents excessive roller contact with the inking segment which results in flat spots.

Other features include autotape printing for addressing gum labels while proofing onto rolls of tape and a skip-and-reject feature which makes it possible for the operator to select and print certain pre-coded stencils from any group. CIRCLE NO. 286 ON READER SERVICE CARD.

FAIRCHILD ACQUIRES PRESS FOR WEB OFFSET FIELD

Fairchild Graphic Equipment reported last month that with the recent acquisition of the Color King web offset press it is now in a position to offer the newspaper and publication printing industries a press designed for producing both color and black and white work.

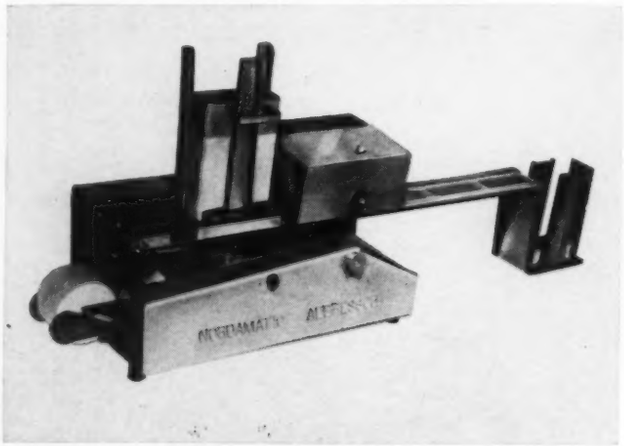
The press, designed by Orville Dutro and formerly manufactured by Waste King Corp., is of unit construction which permits the addition of printing units as needed. A Fairchild spokesman said the press incorporates many new improvements.

A one unit press may be used to print an eight page tabloid or a four page standard newspaper; while a four unit press will handle a 32 page tabloid or a 16 page standard newspaper. Reportedly, the speed of the press is 18,000 newspapers per hr. with half-fold and 14,000 newspapers per hr. with quarter-fold. The Color King is a web perfecting or blanket-to-blanket press.

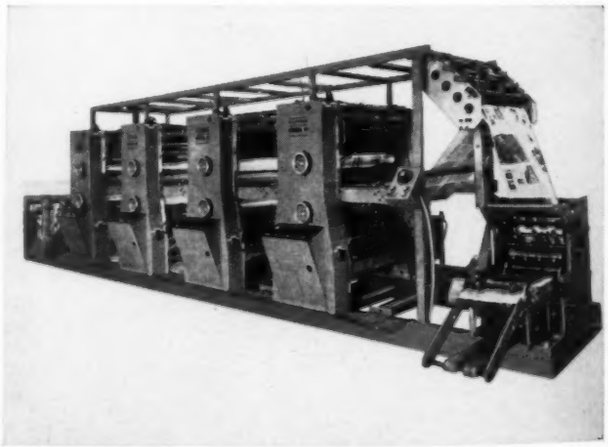
The press is equipped with continuously variable speed drive with inch forward, inch reverse and stop buttons located on each perfecting unit. Each roll stand is equipped with timed feeding belts to regulate infeed of paper at a maintained tension controlled by an air cylinder and floating dandy roller.

Another feature of the press is the lateral and circumferential register adjustments which can be made while the press is running. The press is also equipped with a portable jogging switch.

Water fountain rollers are driven independently and are controlled from the control panel on each perfecting unit. All ink and water rollers are polarized and may be removed and replaced without disturbing fixed adjustments. CIRCLE NO. 287 ON READER SERVICE CARD.



The Nordamatic Addressor prints from stencil plates made on a typewriter at a top speed of 3600 addresses per hr.



Fairchild has improved the Color King web offset press which it purchased for newspaper and publication printing.

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The code reader of the AutoSetter system for automatic tape control of linecasting machines operates from photoelectric cells. The knob on the right of the reader is a speed control for changing speed of casting while the left hand knob is an on-off switch which will stop the tape.

Copy to be used for making paper offset plates on the Electricon electrostatic camera processor is placed on the copyboard (rear). The operator sets required image size using front controls, pushes control button and receives finished plate from opening at right front.

AUTOMATIC TAPE CONTROL FOR LINECASTING MACHINES

Star Parts, Inc., has introduced its new AutoSetter, an all electric system for automatic tape control of linecasting machines. The use of electronic components, rather than mechanical linkage, permits instantaneous channeling of signals from the code punched in the tape to the matrix release solenoids. Electronic circuits are said to eliminate moving parts.

The AutoSetter system utilizes five principal assemblies. The code reader operates from standard six unit perforated tape and is compatible with other tape systems. The reader translates tape signals into electric impulses at high speeds up to and beyond 14 lines per min. A light source is directed onto the tape, and depending on the code, one or more photoelectric cells are energized. It is not necessary to stop the tape to read each signal, as blank space between one signal and the next acts as a shutter. Speeds can be varied from one line per min. up to the capacity of the machine.

The code converter console receives electrical signals via a cable from the reader and channels them to the proper solenoid in the operating unit attached to the back of the keyboard. The electrical signals are automatically recognized and scanned for double characters or other signals requiring automatically inserted delays, which are provided in order to prevent transpositions and to allow time for the lateral rail to operate.

The keyboard key bar operating unit is a battery of solenoids assembled as a unit and attached to the back of the linecasting machine keyboard. The solenoids operate levers which in turn lift the key weights. The operating unit can be applied to any machine without drilling or tapping and is held in position by two bolts.

The assembling elevator lift mechanism is a simple clutch device which provides for rapid acceleration and deceleration with the highest speed occurring midway between the down and up position of the elevator.

Push button controls are available for upper and lower rails, assembling elevator, tape feed and a control for disengaging the assembling elevator lift clutch in case of elevator stoppage. These buttons are used by the operator or monitor when the machine is manually controlled. Circle No. 255 on Reader Service Card.

ALUMINUM GATHERING RACK

Evans Specialty Co., Inc., is using a new aluminum alloy in the manufacture of its gathering rack used in mailrooms. The company states the new alloy increases the rack strength while reducing the weight of the 18 section model. Each rack holds 500 sheets of paper at an angle for gathering. Circle No. 252 on Reader Service Card.

RECONDITIONING SERVICE OFFERED FOR ROLLER CLEANERS

Jomac, Inc., has initiated a reconditioning service for its dampener roller cleaners and dampener driers. Reconditioning of cleaners includes complete disassembly of the machine, replacement of worn parts, renewal of the greasing system and inspection of the tanks for leaks. Brackets are attached to facilitate subsequent installation of Jomas dampener driers and if required, the cleaning rollers are regrooved and replated and new tanks installed. Circle No. 253 on Reader Service Card.

ELECTROSTATIC PROCESS FOR PRODUCING PAPER PLATES

The Electricon Processor, which automatically makes paper offset plates in 60 sec. from any black and white, color, halftone, drawn, written, typed or printed material, and enlarges or reduces size, has been developed by Robertson Photo-mechanix, Inc. The machine employs a dry, daylight electrostatic process of producing paper offset masters suited to short production runs, from 15 to 300 copies, on standard offset duplicators.

The Electricon combines a camera, which will enlarge copy up to 200% or reduce to 50%, with an automated handling system for making the paper plate. Once material to be copied is set up and appropriate settings made, the company claims that no further operator attention is required until the finished plate is ready for removal from the machine. The Electricon reduces to 5 min. or less the complete process of making a plate, installing it on a press and running copies in quantity, company officials state.

Three models of the Electricon produce plates in nominal sizes of 8½ in. by 11 in., 11 in. by 17 in., and 17 in. by 22 in. Circle No. 254 on Reader Service Card.

INK BRAYER WITH LEGS

Triumph Equipment Engineers has announced that its line of Economy proof rollers are now manufactured with legs to eliminate roller flat spots. When left on an ink plate, the brayer's legs prevent contact between ink roller and plate surface. The brayer is available in either 3 in. or 6 in. sizes, with or without a 1¾ in. composition roller. Circle No. 295 on Reader Service Card.

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⑤ Average total employment in plant at this address:

- ☐ 10-19
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PRINTER: (including commercial, trade and private plants)

- ☐ Letterpress Printer
- ☐ Lithographer
- ☐ Lithographer and Letterpress Printer
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- ☐ Flexographic Printer
- ☐ Screen Process Printer
- ☐ Letterpress and other printing, except Lithography
- ☐ Lithography and other printing, except Letterpress

TRADE PLANT:

- ☐ Composing
- ☐ Engraving (both Letterpress and Gravure)
- ☐ Lithographic Platemaking
- ☐ Engraving and Lithographic Platemaking
- ☐ Duplicate Platemaking (including electrotyping, stereotyping, rubber and composition plates)
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Reader Service Department

Rolling speed can be varied from 25 to 200 in. per min. on Walter Scott & Co.'s new variable speed drive unit for its Ideal mat rollers.

Adjustable belt speed is a feature of the special purpose portable drying conveyor recently introduced by Standard Conveyor Co.

VARIABLE SPEED DRIVE FOR SCOTT MAT ROLLERS

Walter Scott & Co. is now offering a variable speed drive on its Scott Ideal stereotype mat rolling machine as an optional feature. The drive enables the operator to select both the speed of rolling and the speed of the return stroke by turning dials located adjacent to the regular push button stations.

Rolling speed can be varied for various moisture content in the matrices, from 25 in. per min. to 200 in. per min. Company officials state that the variable speed drive feature can be adapted to any Ideal mat roller now in operation as well as on the latest model roller. CIRCLE NO. 258 ON READER SERVICE CARD.

WEB SPLICE DETECTOR

A new electronic device that reacts instantly to a splice in a web and is said to be ideal for use on transparent, translucent or webs that appear opaque to the eye has been announced by Machine-O-Matic, Incorporated. The splice detector is completely automatic, does not come into physical contact with the web and is said to operate at any web speed. CIRCLE NO. 270 ON READER SERVICE CARD.

BROWN DEVELOPING SINK AND WASHER-VIEWER

A temperature controlled developing sink and washer-viewer combination has been announced by W. A. Brown Mfg. Co. Several models of the combination are available. The 20 in. by 24 in. and 26 in. by 30 in. model (tray size—sink hold three trays) for processing larger film sizes is manufactured as a combination sink and washer-viewer or may be purchased in separate units. The smaller 12 in. by 15 in. size is an integral sink (holding three trays) and washer-viewer unit.

Among the features of the equipment are: Water temperature controls with vacuum breaker to regulate a steady temperature of 68 deg.; control for sustaining water flow at 1/3 gal. per min. change; built-in illuminated areas under the first tray of the developing sink with red safe light to enable inspection; and red and white light source under the viewer dot etching area. CIRCLE NO. 288 ON READER SERVICE CARD.

DUPLICATOR BLANKETS ARE INDIVIDUALLY PACKED

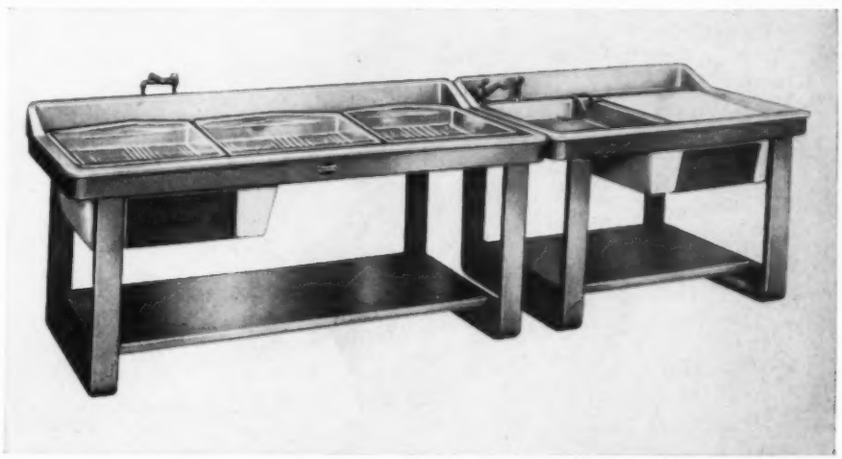
The Vulcan Div. of Reeves Brothers, Inc. is now offering individual packing of its Durofyne offset duplicator blankets. The blankets are available in red, black and green in sizes to fit all current models of duplicating machines. Individual packing, the company states, protects the blanket from dust, scratches, abrasion and makes stocking easier. CIRCLE NO. 265 ON READER SERVICE CARD.

SPECIAL DRYING CONVEYOR ADJUSTABLE IN HEIGHT

Information on a new special purpose drying conveyor for specialty printing has been received from Standard Conveyor Co. The portable, self contained belt conveyor with low profile ends designed to fit into the delivery board is adjustable in height at both ends of the conveyor, the company states. Speed of the one way belt is adjustable. The conveyor supports are fitted with casters for portability and floor locks for positioning at the press. CIRCLE NO. 256 ON READER SERVICE CARD.

BOURGES DESIGNER COLORS

Mauve, teal blue, terra cotta, olive and chartreuse are the first colors announced by Bourges Color Corp. for its new series of Designer Colotones. Designer Colotones come in adhesive sheets for layouts and package designs, and overlay sheets for color separations and actual camera copy. CIRCLE NO. 297 ON READER SERVICE CARD.



The new Brown fibre glass developing sink and washer-viewer combination features temperature control of incoming water at 68 deg. It holds three trays.

TABLE FOR PASTEUP WORK

A composing table designed for use in conjunction with photocomposition pasteup operations had been announced by W. A. Brown Mfg. Co. The unit is constructed of heavy gauge steel and has an adjustable tilting top

with settings in 1 in. increments to approximately 35 deg. Other design features include a 21 in. by 26 in. light area with a high and low light source, a 22 in. by 26 in. working area, storage drawer, side tray for tools and materials and a disposal bag. Over-all dimensions of the table are 31 in. by 46 in. by 39 in. CIRCLE No. 271 ON READER SERVICE CARD.

36 IN. BALEMASTER HOGGER

A 36 in. hogger for paper and paperboard has been developed by Balemaster Div., East Chicago Machine Tool Corp. The unit is recommended for operations where moderate hogging capacity is required. It is supplied in standard models or units for hogging corrugated, boxboard, paper slabs, roll ends and signatures.

It is stated that the hogger may be adapted for use with present scrap handling and baling equipment. CIRCLE No. 291 ON READER SERVICE CARD.

NEW FAST SETTING INK FOR CORRUGATED PRINTING

An ink that is claimed to set in 45 sec. and dry in four min. without steam, water or heat, was recently introduced by Interchemical Corporation's Printing Ink Div. Developed for printing on corrugated and multiwall kraft, the ink is marketed under the name of IPI Poly-Set. According to the manufacturer, the ink features good finish and rub resistance, sharp printing, smooth lay and good press stability.

The ink dries by means of a rapid interaction between the cellulose fibers of the substrate and the vehicle system in the ink. Principal advantage of this fast drying system is that it enables the corrugated container producer to go directly from the printer-slotter into finishing equipment, including folding operations, without concern about streaking or damaging printed areas. CIRCLE No. 262 ON READER SERVICE CARD.

TRANSPARENT COLOR TAPES

Transparent, self-sticking tapes in 20 solid colors and 10 patterns are now available from ACS Tapes, Inc., for use in preparation of artwork, slides, layouts, etc. CIRCLE No. 297 ON READER SERVICE CARD.

SAYS PAPER HANDLING COSTS REDUCED BY USE OF TRAYS

Specially designed trays are claimed to affect a 50% reduction in paper handling costs for printing plants and letter shops by Hartman Metal Fabricators, Inc. Basis of the system are portable, hook-on-trays in four standard sizes each having a capacity of 40 lbs., used with accessories for application in a variety of operations.

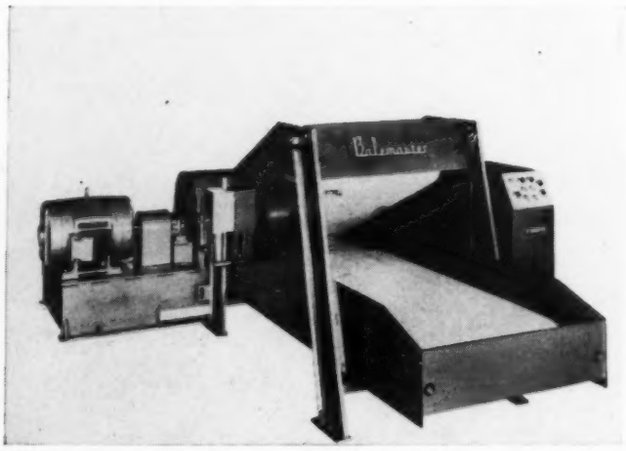
Mobile racks provide compact storage space for up to 26 trays. The same

trays can be used with stationary floor racks and wall racks to add flexibility to the total system. Assembly tables, using a table mounted rack, keep work in front of employees at all times for various operations. By positioning work more advantageously for repetitive operations it is claimed material can be handled faster with this system. CIRCLE No. 296 ON READER SERVICE CARD.

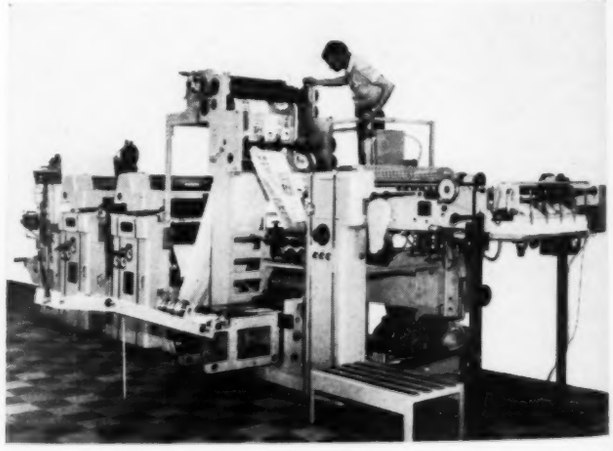
PRESS FEATURES OFFSET UNITS AND LETTERPRESS IMPRINTING

A special Speed-Flex web rotary press that incorporates offset units, letterpress imprinting units, a publication folder and a receding pile delivery has been announced by Puglisi-Dutro, Inc. A double ending device has been installed on the press to provide two color printing on each side of the web when a half width web is processed through the piler unit.

The folder is of the 2 to 1 ratio jaw and tuck and chopper type that will handle multiple webs. It is stated that it will operate at speeds up to 20,000 folds per hr. Similar four unit presses incorporating four offset printing units and double mill roll stands have also been designed. CIRCLE No. 292 ON READER SERVICE CARD.



The 36 in. Balemaster hogger is designed for moderate hogging operations. The equipment is complete with pinch table, motor, exhauster and control panel ready for connection.



Puglisi-Dutro has developed a line of special order Speed-Flex web rotary presses that incorporate offset and letterpress imprinting units. Publication folder is included.

PRINTING INDUSTRY PATENTS

Covering patents issued during the past three months.

All new patents for the printing industry are reported exclusively for PRINTING PRODUCTION by Invention, Inc., an industrial patent research organization in Washington, D. C. Invention, Inc., presently has the only staff in the country that examines, in the U. S. Patent Office, the complete printed copy, drawing by drawing and page by page, every one of the several hundred new patents issued each week. PRINTING PRODUCTION is the only trade publication in its field offering a report based on this complete coverage. For copies of the patents listed here specify the patent numbers and send 25c for each separate patent, or 10 for each trade mark or design patent (stamps not accepted) to the Commissioner of Patents, Washington, D. C.

Composing Room:

HYDRAULIC SYSTEM

This compact hydraulic system for incorporation in a linecasting machine features a unitary relief valve, reservoir, and check valve, thus requiring only one hydraulic link with the master cylinder. The relief valve and check valve are positioned coaxially and arranged to perform their functions in conjunction with a closed reservoir having a communicating aperture axially aligned with the valves. The respective actions of the relief valve and check valve are differentiated as different selected pressure conditions obtain within the over-all system. No. 2,979,077 by Carl F. Swenson, assignor to Star Parts, Inc.

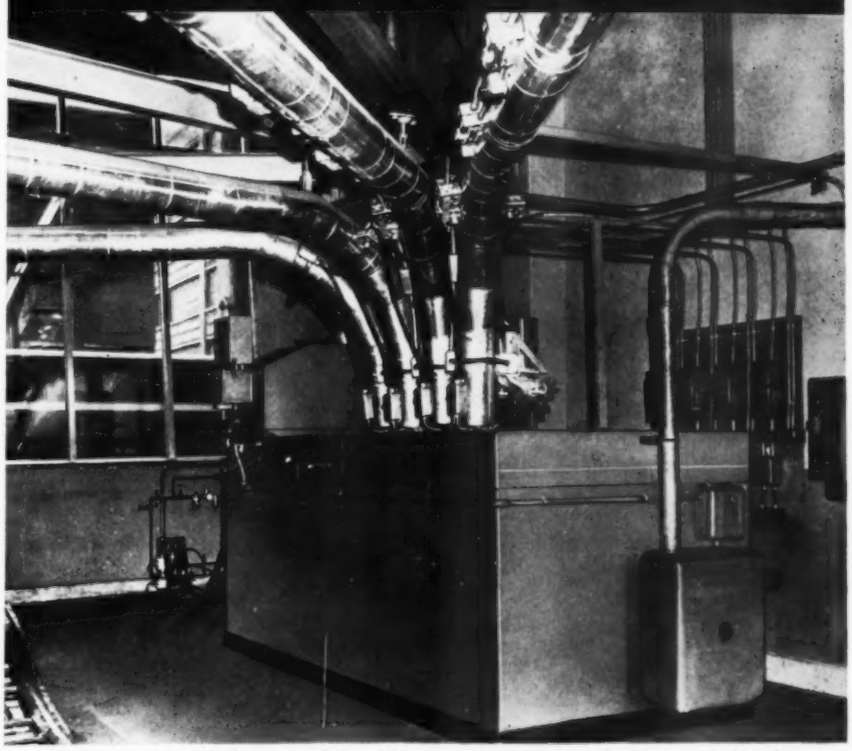
FONT PLATE MAGAZINE

Efficient photocomposition operations are accomplished by providing a compact font plate magazine and selection device which may be equipped to store a large number of font plates. It is capable of rapidly replacing an operatively positioned font plate with any one of the stored font plates. At the same time, the replaced font plate is stored in the magazine. No. 2,976,787 by Daniel H. Robbins, assignor to Mergenthaler Linotype Co.

CHARACTER FONT PLATE UNIT

In carrying out the invention, there is provided a glass plate having a photo-

NOLAN MASTER POT AT "LA PRESSE"



Conveyor carries dead plates to 20-ton Nolan master pot; overhead piping system transfers molten metal to four casting machines — *all automatically!*

Plate casting at Canada's largest daily, Montreal's La Presse (300,000 circulation in four editions, averaging 64 pages) is no small task... and a special Nolan molten metal transfer system permits production of as many as 800 plates a day, reports Roger Marchand, La Presse's Directeur de la Production. From plate loading to transfer of molten metal, it's a completely automatic operation — savings in time, higher efficiencies, new convenience!

WHY NOT ASK THE NOLAN MAN TO CALL ON YOU?

He's an expert on remelt systems . . . large, small, and in-between. You'll find his suggestions make sense, the visit well worthwhile. A letter or phone call will bring him to you.

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For More Information Circle 144 on Reader Service Card

graphic emulsion on one side whereby character images are formed on the plate. The plate is secured in a mounting frame with its character bearing emulsion surfaces abutting a plurality of hardened precision spacers which project through the mounting frame. The frame is provided with two wear resistant surfaces that serve as reference surfaces or edges for locating the character font plate unit in the photographic machine. No. 2,976,786 by Wolfgang O. Grube and Richard K. Walker, assignors to Mergenthaler Linotype Co.

PHOTOCOMPOSING CAMERA

A camera device is employed for preparing master plates containing fonts of characters from which selection may be made in the production of photocomposition for printing. The camera photographs on film extremely accurately formed and positioned character representations, and fonts of characters are printed onto a master character plate from the film. A rotatable film support has accurately machined positioning elements for the film and a vacuum system adheres the film to the support surfaces. No. 2,981,148 by George J. H. Sausele, assignor to American Type Founders Co., Inc.

TYPE COMPOSING APPARATUS

An optical senser controls duration of the feed of photosensitive sheet material in a photocomposition machine. The mark is projected upon a photoelectric cell at an instant determined in dependence on the position of the mark by a movable optical element connected for movement with the feeding structure. Each step of the intermittent feed movement commences at a selected instant of the cycle and is terminated by an impulse produced by the photoelectric cell. No. 2,978,969 by Hugo Heine.

Platemaking:

TIMER FOR COLOR POSITIVES

An electronic printing timer determines the proper parameters required for making color positives on film. The same light source is employed for establishing a desired positive color reproduction on a cathode ray tube and for exposing positive film upon which the color picture is to be finally developed. A nonscanning illumination source is employed, such as a printing lamp. The light intensity from the lamp can be varied to obtain a resultant positive picture having the desired brightness color characteristics. No. 2,981,791 by Thomas P. Dixon, assignor to Technicolor Corporation.

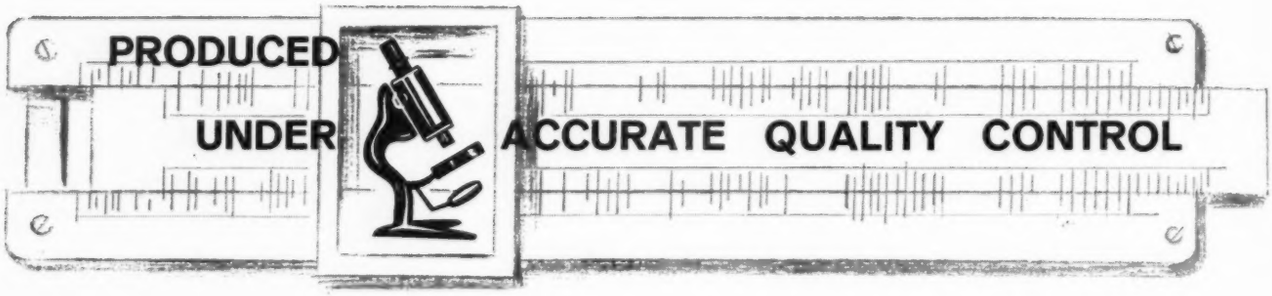
LIGHT SENSITIVE MATERIALS

A light sensitive photographic element comprising layers of synthetic material is useful in printing and phototechnique procedures. The element consists of a support having two opposing surfaces. One surface is coated with a layer of a material consisting of an acetal of partially acetylated polyvinyl alcohol and niueanthracene aldehyde. This material is the sole light sensitive component of the element and it is removable from the support with an organic solvent. No. 2,980,535 by Gustav-Adolf Schroeter, assignor to Feldmuhle Papier- und Zellstoffwerke Aktiengesellschaft.

PHOTOGRAPHIC SOLUTIONS

A photographic composition useful in forming relief images is applicable to the Graphic Arts industry in the area of photoengraving, lithography, or collotype. The composition consists of a light sensitive diazo compound incorporated in a water insoluble resinous copolymer. The resinous copolymer consists of styrene and maleic anhydride esterified with 0.1 to 0.6 molar

BEVERIDGE MATS



In making all Beveridge Mats, rigid quality control starts with raw materials and is carried through the complete manufacturing process. For the newspaper field results of such control are plainly evident in one-piece BEVERIDGE AUTO-PACK packless mats, BEVERIDGE HI-SPEED and BEVERIDGE MULTI-CAST mats. Each enables you to attain uniformly high reproductions—the utmost in mat satisfaction.

And quality control applies equally to mats for the syndicate field where BEVERIDGE "RED" CONTRAST, the market's most readable of all mats and BEVERIDGE "500" SYNDICATE, a strong, low density, almost indestructible mat—are demonstrating daily their outstanding advantages.

May we send you information, samples or give you a plant demonstration on any of the above mats?

NEW PRODUCTS DIVISION

THE BEVERIDGE PAPER COMPANY

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For More Information Circle 17 on Reader Service Card

proportion, per molar proportion of maleic anhydride, of an alkanol containing one to eight carbon atoms in its structure. No. 2,980,534 by John O. Printy and Edward Wangelin, assignors to Monsanto Chemical Co.

ELECTROPLATING PROCESS

The patent covers a method of electroplating zinc on a basis metal for use as a lithographic plate and the composition for application to such plate. One composition claimed consists of zinc and titanium in solution, the principal negative ions of the solution being fluoborate ions. The solution is maintained sufficiently acidic so that it manifests a yellow to yellow brown color as opposed to the emerald green of solutions more acidic and the brown color of solutions less acidic. No. 2,977,295 by Carl F. Cooper.

DEPTH READING MICROSCOPE

The apparatus takes the form of a depth reading microscope and includes a mounting mechanism for the microscope. The mounting maintains the microscope normal to the relieved surface of a printing plate and is movable over a considerable area of the plate at a fixed distance. No. 2,976,762 by Arnold L. Imshaug.

PLASTIC MOLDING PRESS

The press has a controlled temperature flexible pressing surface for casting plastic printing plates, molding matrices, etc. The press incorporates a closed chamber, a work support, a spaced wall flexible bag dividing the chamber into two compartments, and mechanism to supply an absolute pressure to the top section of the chamber. No. 2,975,476 by John E. Burke.

STEP AND REPEAT DEVICE

The apparatus is designed for exposing a composited negative or positive so as to create multiple images onto a press plate. A master plate sheet is provided with a base reference line and a center mark that are used to accurately position a press plate upon the master plate sheet. The master plate sheet is mountable upon the rubber back of a vacuum printing frame and the press plate is positionable upon the master plate sheet so as to receive multiple images. No. 2,975,694 by Kenneth M. Pell.

PLATE DIMENSIONAL UNIT

The apparatus features a C-bar having spaced arms with an anvil mounted at the outer and upper end of the lower arm of the C-bar. The C-bar fits over a curved printing plate and a dial indicator rides on an arm of the C-bar to indicate dimensions of the plate. No. 2,976,615 by Arnold L. Imshaug.

Feeding, Folding, Delivery:

PRESS FOLDING MECHANISM

A drive for the folding blades elements of a 3:2 type folder mechanism utilizes planetary and differential gear members. The drive consists of sun and planet gearing at one end of the cylinder supported by a rotatably adjustable member and the folding blade carrier. The folding blade operates for folding a product once every other revolution of the folding cylinder. No. 2,981,540 by Charles A. Harless, assignor to R. Hoe & Co., Inc.

FRONT REGISTER MECHANISM

For handling stiff, heavy sheets of cardboard, this mechanism comprises a plurality of gauge pins on a cylinder and a plurality of pairs of feed rolls for use in registering paper sheets against the gauge pins. When feeding untrimmed cardboard sheets all of the feed rolls take and commence feeding a sheet toward the gauge pins. All but two spaced pairs of feed rolls are aligned in the direction of feed. Two

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• time
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• up to 1,500 per min.
• complete tabbing freedom

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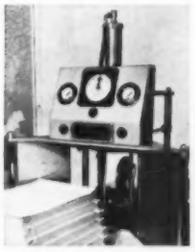
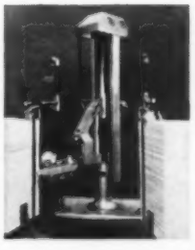
Checks
Coupons
Currency
Envelopes
Film
Foil
Labels
Ledger
Looseleaf
Security printing & counting
Sheet paper stock
Stamps
Writing pads



VACUUMATIC MARK II
Counts sheet sizes from 2" x 3" to 36" x 40" in stacks to 12" high at the rate of 1,500 per minute.



VACUUMATIC MARK V(B)
Designed for large production counting. Swinging head feature allows for immediate counting of second 4 ft. high stack after first is counted. Counts up to 450,000 sheets in 8 hr. shift. Handles the smallest to largest sizes of paper.

Other Vacuumatic counter models are available for more specific jobs. These also have standard mechanisms for tabbing at 100, 250 or 500 intervals. An electronic accessory provides for tabbing at any count desired from 6 to 999. Prices range from $3,000 to $8,650 depending on model.

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This transistor "mat detective" scans each line mat by mat in any tape composition, stops machine if error occurs. Avoids repeated mechanical errors, cuts proofreading and re-run time amazingly. Standard power or 230 v. 50 cycle—for export.
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CALGARY HERALD
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HOUSTON
JACKSONVILLE
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EVENING STANDARD
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For More Information Circle 11 on Reader Service Card

gauge pins on the cylinder release the sheet as it approaches the gauge pins. Final registration against these pins is accomplished by the two feed rolls aligned therewith. No. 2,977,115 by Jack E. Vandeman, assignor to Harris-Intertype Corp.

SHEET FEED MECHANISM

A feature of the feed is the use of a camshaft operating the sheet registration and control devices. It is situated on the front portion of the feed plate and is driven from a convenient member on the printing press. The drive is arranged so as to accommodate for any variations in center distance due to raising or lowering of the feed plate in a vertical direction or adjustment of the front portion of the feed plate for varying griphold in a horizontal direction. No. 2,976,038 by Fred Whyte.

STREAM FEEDER UNIT

The machine feeds sheets of paper, card, or thin metal as a continuous stream of partly overlapping sheets over a feed table to a front lay station. Here each sheet is arrested with its front edge against front lays to obtain accurate registration. A slow down device is carried by an endless flexible element constrained for movement beneath the table around an endless path with upper and lower oppositely moving laps extending in the direction of sheet travel. The flexible element is moved in a direction such that the upper lap travels in the same direction as the sheets. No. 2,979,331 by Headley Townsend Blackhouse, Les Rayons.

Printing Presses:

PRESS UNIT CONTROLS

A control system for multi-unit newspaper printing presses permits isolation of any unit without disturbing the control circuits of the other units, thereby maintaining maximum capacity at all times. Each control station for each unit is separately connected alternatively to the controller circuit from the control station of a folder on both sides of the unit. Selection is made by manually operable supervisory switches which may be located apart from the units. No. 2,979,646 by William H. Rouse, assignor to Cutler-Hammer, Incorporated.

OFFSET PRINTING CYLINDER

A printing cylinder has a number of sets of type wheels so that several lines of type can be set up and an offset cylinder receives impressions of the lines of type. Intermeshing gears on the two cylinders are designed so that each rotation of the printing cylinder causes a number of rotations of the offset cylinder. Thus the impressions of the lines of type are made upon the offset cylinder on its several rotations. The positions of the several lines of type on the printing cylinder are so determined that the impressions are properly spaced on the offset cylinder. No. 2,981,181 by Jack R. Levien.

CONTINUOUS WEB PASTER

This invention winds successive rolls from a continuously travelling web without the need for stopping the treated web. The web is pulled along a path by winding it on a driven bundle, while a stationary second bundle is prepared with initial turns of a web leader. The terminal portion of the leader is positioned adjacent to the path, and the second bundle is driven at a peripheral speed the same as that of the first bundle while the terminal portion of the leader is secured to the web travelling in the path. No. 2,980,356 by William C. A. Beese and Herbert E. Bergmann, assignors to Azon Corporation.

BLANKET CLAMPING DEVICE

This rotary blanket cylinder has a bore and slot parallel to the cylinder axis and disposed along its peripheral surface. The bore serves to house the blanket clamping assembly and the slot receives the head and tail ends of the blanket. A rotatable shaft and a split tube encircle the shaft throughout its length. The shaft is provided with a device for clamping and tensioning the head and tail ends of the blanket on the cylinder. No. 2,980,016 by Hans J. Luehrs, assignor to Cottrell Company.

PRESS SPEED CONTROLS

A control is provided to adapt a printing press to run at a selected constant

Hoe Presents Press Model – Raymond Cassidy, left, Hoe representative, presents a model of the Hoe Colormatic press to John B. Johnson, center, editor and publisher of the Watertown (N.Y.) *Daily Times*, during an open house dedicating a new press plant and equipment. E. Roland Abare, press superintendent, looks on.

threading speed and over a range of higher printing speeds. Initial actuation of a faster switch operates a threading motor, and subsequent actuation of the switch operates a main motor to raise its speed and to stop the threading motor. Initial actuation of a slower switch lowers the speed of the main motor and subsequent actuation of the switch, when the main motor is at its lowest speed, is necessary to effect reoperation of the threading motor and to stop the main motor. No. 2,978,-979 by William H. Rouse, assignor to Cutler-Hammer, Inc.

SCREEN PROCESS PRESS

The press is designed to permit close registration in which the squeegee contacts the screen while moving in one direction. An even coat of paint on the screen is assured by the spreading action of a filler bar which moves across the screen when the squeegee is returned to its initial printing position. No. 2,975,705 by Louis Gilman.

DUPLICATING MACHINE

The machine is driven by an electric motor and is of the type using a rotating drum carrying a master. Sheets are fed from a stack placed on a supporting tray. It is automatically cut off when the last sheet is fed from the tray. This operation enables the control mechanism to drop through a great distance and provide highly accurate control in the shutting off operation. No. 2,975,707 by Edward M. Springer, assignor to Heyer Inc., by mesne assignments.

PATENT SEARCHES
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PRESS REGISTER DEVICE

The device is of the type covered by patent 2,949,851. A register correcting mechanism comprises an adjustably and pivotally mounted bell crank carrying two rotatably mounted sprockets for operation with a chain driven press. In the present patent, a single lever mounted sprocket is used in conjunction with a slack compensating device to effect the same general result. No. 2,975,708 by James G. Ghormley, Jr., and Clyde T. Kitchens, assignors to Ghormley Engineering and Mfg. Co.

MULTICOLOR PRINTING

The patent is designed to improve registration of comparatively thick webs. Included is the marking of the web edge in a first printing unit. Also included is scanning the marker between first and second printing units to measure the position of the marker after a number of repeats in order to detect a layoff change. The arrangement is such that the same scanner may then be used to help restore uniform layoff when needed. No. 2,972,297 by George N. Auerbacher, assignor to Champlain Company, Inc.

Miscellaneous:

STENCIL ASSEMBLY UNIT

This assembly may be furnished to a user as a unit with a stencil attached to a record sheet in the proper position, according to the record sheet form. The stencil is easily detachable from the record sheet so that the latter may be transmitted as required or filed. The stencil is then attached to a stencil duplicator for making shipping tags, labels or for other duplicating purposes. No. 2,976,802 by Jack H. Mason, assignor to Multistamp Company.

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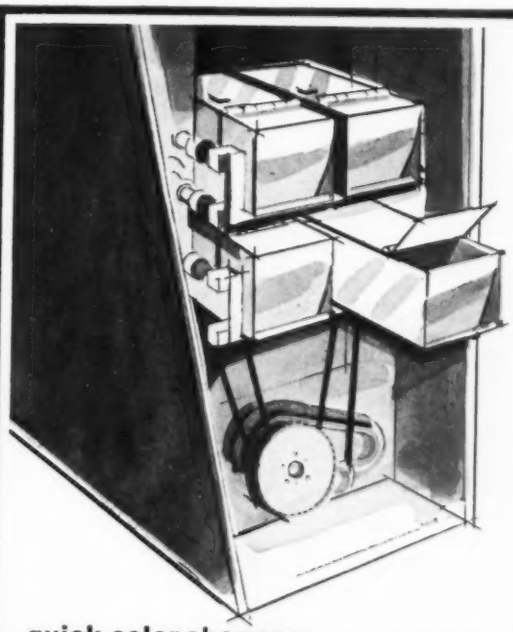

quick color changes are easy to make, no longer messy, with these Hoe Colormatic* ink containers. Each container holds enough ink for at least 40,000 standard size pages of average color content. Quick-snap couplings make changing or removal rapid, simple, and foolproof. Color change is handled by merely sliding in a container of solvent, flushing out lines, and then replacing with desired new color ink in another container.

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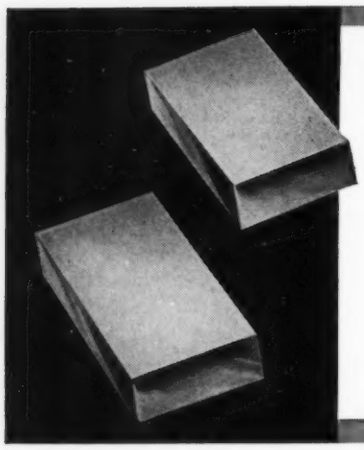

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Offset Printed Dailies

(CONTINUED FROM PAGE 35)

ing. Should this come about, proofing of photocomposed ads would be simpler and faster than present hot metal proofing.

He mentioned Xerography as a potential proofing method but the system is presently a failure, he said, when it comes to reproducing halftone and solid black areas. Burrell cited proofing as "one of the real stumbling blocks in the application of photocomposition and offset to the newspaper industry."

A 26% increase in dollar volume and a 4% payroll decrease were reported by Carroll Knicely, publisher of the Glasgow (Ky.) *Times*, in the first fiscal year of the paper's transition from letterpress to offset. Knicely and two other offset publishers described operations in their respective plants.

Knicely cited a desire to reduce production costs, outgrowth and replacement of equipment, a growing circulation and added cost of potential stereotyping personnel as one of the reasons for the change to offset in Dec. 1959. Equipment, which was obtained gradually, includes five Justowriters, one Varityper, two Headliners and a Vanguard press.

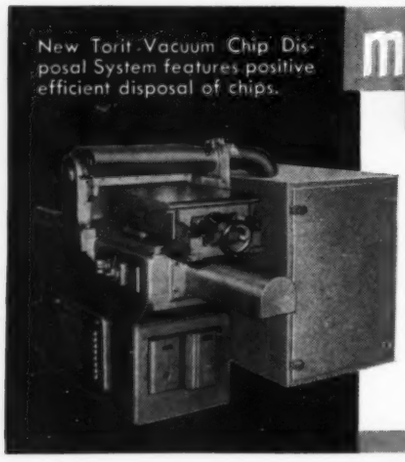
Improved reproduction, increased page capacity and the use of more color are some of the advantages brought about as a result of the switch to offset. Knicely stated that 12 pages can now be produced with the ease that eight letterpress pages formerly were prepared. Greater over-all speed in producing the paper with less production personnel and better control by the news and ad departments over page makeup were other advantages given.

The inexperience of his personnel was one of the major management problems the Kentucky publisher faced in the early stages of the change to offset. Greater cost consciousness and higher newsprint waste were other trouble spots in the first few weeks of the new operation.

Various per page production cost figures were presented by John R. Thistlethwaite, Opalousas (La.) *World* publisher. The *World* claims it is the oldest offset daily newspaper in this country, having been printed by offset since 1939 and by web offset since 1947.

Figures per tabloid page given for the *World*, which averages a 10,450 press run, were: composition $4.88, platemaking $2.31, press cost $2.22, newsprint and ink $6.39 and stuffing 86c.

Staley T. McBrayer, publisher of the Arlington (Tex.) *News-Texan*, reported that his plant produces four different daily newspapers for area towns, turning out approximately 300 pages per week in a composition area 25 ft. by 45 ft. Combined total circulation is near 27,000. In addition to a 16 page Vanguard press, rated at 12,000 papers per hr., the *News-Texan* houses six sets of Justowriters, four Headliners, one ATF Typesetter, Typro and Protype photolettering machines, one Brown camera for platemaking and a Kenro for prescreening photographs, making reverses, etc. ⊕



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R&EC Meeting

(CONTINUED FROM PAGE 50)

stated that in some cases display phototypesetting and hot metal in combination are used.

Complicated chemical formulae and equation composition as done on Photon photocomposition equipment was illustrated and described by Joseph Kuney. He is assistant to the director of publications for the American Chemical Society in Washington, D.C., which sponsors six publications. His organization spends over $1 million per year in typesetting. Over 700 pages of complicated photocomposition, it is anticipated, will be done this year.

Basically, Superior Type, Inc., in Atlanta, Ga., is a trade plant, reported Louis Bowen, the firm's secretary-treasurer. Work is done by hot metal and photocomposition. Bulk of photocomposition is done with Linofilm and Filmotype.

Among the requirements necessary to insure successful operation of photocomposition, Bowen said the plant must be air conditioned at 75 deg. and not over 80 deg. F. It is essential to have constant electrical current; in this respect, Superior Type moved a transformer to the outside of the building.

"Two things are wrong with the printing business: Good printing costs too much – poor printing doesn't cost enough," asserted Hal T. Benham, president, The Benham Press, Indianapolis, Ind. In humorous manner, Benham spoke of the successful use of Dycril printing plates for nearly a year. His firm does commercial printing. Runs average from 10,000 to 15,000 with occasional orders for 25,000 quantity. Much of this work is done in color from Dycril plates on Kromekote.

Plate Production Experiences

Benham related that when the use of Dycril printing plates was first considered by his company, a photoengraver wasn't interested in furnishing the plates. Subsequently, Benham said, his company made the $10 thousand investment in equipment to make its own plates.

The Dycril process was installed in the Benham Press to sell printing –not offset or engraving, according to Benham. "In fact," he continued, "we didn't mention the process by which a job is to be done. We estimate jobs three ways but don't always quote them to the customer."

Among Benham's informative comments were: "In some jobs we use negative to positive to negative to make Dycril plates, the same as for offset. A charge is made for the negative. Over-all the plates are accurate–they're flat as hell. Makeready is done in half the time required for offset. Some of our jobs are done by letterpress and offset in combination. We can make duplicate Dycril plates cheaper than the cost of electrotypes. Plates can be adhesive mounted on wood or on patent base. Interstices between halftone dots average 0.004 in. deep; in line work average depth of nonprinting areas is 0.040 in."

Benham feels the cost of Dycril stock is too expensive at $9.75 per sq. ft. Also to be considered is the ½ in. waste area along the sides of an 18 in. by 21 in. plate.

The wrap-around plate is in use

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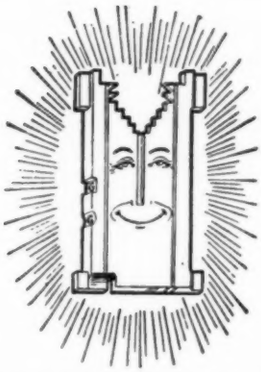

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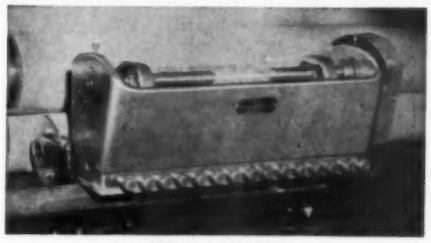

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in the plant of Wheeler-Van Label Co., Grand Rapids, Mich. Clair M. Donovan, plant manager, said his firm primarily is engaged in long-run label printing. He explained that his firm has not yet done much process color work with wrap-around plates.

Zinc alloy and magnesium plates are used in 0.025 in. and 0.032 in. thickness. Etching depths range from 0.007 in. to 0.010 in.

One of the problems on which the speaker's organization is working is the cracking of plates on the press. He feels that the strength of the plate is enhanced by inducing curvature before processing. "If a 0.025 in. plate is used, unetched bearers should be left on the plate." The problem of printing length can be solved by compensating in the film areas.

For long runs on a 23 in. by 30 in. magnesium plate, about $25 cost is added for chrome plating. Outstanding results in laying down strong color solids have been secured in printing from wrap-around plates.

Normal press running speed is 7000 per hr. In some cases, due to poor paper, it has been necessary to slow down the press to 6000 sheets per hr. Plate and color changes normally require 2 hrs. time. Paper spoilage is low—one or two sheets are lost per press stop.

Concluding session of the R&EC's Des Moines meeting was devoted to binding and finishing of short and medium run publications and books.

Moderator John O. McCahon, chief engineer of The Smyth Manufacturing Co., introduced the speakers. The first of these was John H. Tancill, assistant to the vice president in charge of manufacture, National Publishing Co., Washington, D.C. Tancill related that his firm processes 60 publications each month, consisting of quantities from 12,000 copies up to and including 900 thousand copies.

Enoch Jones, vice president production, The Colonial Press, Clinton, Mass., presented an analytical discussion about the perfect binding of Pocketbooks. ⊙

Pleasing Color

(CONTINUED FROM PAGE 37)

screen and color compensating filters. As all the separation negatives were balanced to more or less the same density values, uniform screening conditions were used for the halftone positives. Screening conditions were first established for the cyan printer. The same information was used for making the magenta and the yellow halftone positives.

Deep-etch plates were prepared from these screen positives. Press proof sheets were run, using a balanced set of three-color process inks. By a balanced set of inks we mean one which, in our experience, has been found to be most satisfactory to produce a neutral when equal amounts are printed on top of each other. Control bars and blocks of solids and 70% tint were incorporated with the positives to standardize the ink film thickness.

The original transparencies were then compared with the press proof

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sheets. Examination disclosed that

1–No. 85B filter mask resulted in good tone reproduction and color balance in the reproduction from Transparency A.

2–No. 33 filter mask lightened the reproduction of greens in Transparency B and gave more brightness and color saturation to the reproduction.

3–No. 29 filter mask lightened both blues and greens in relation to the reds in the reproduction made from Transparency C. The reproduction showed correct tone reproduction with improved color saturation, hue and brightness.

This study proves that the single mask technique is by no means limited to the reproduction of high quality and well balanced transparencies. A change in the masking filter can extend the scope of this technique to transparencies with varied degrees of color distribution and to transparencies with one or two predominant colors. There is, however, one point which must be stressed before concluding this discussion. The pleasing color single mask technique produces results of optimum quality only when rigid quality control and standardization are maintained throughout the procedure. ⊕

Web Offset Glamour

(CONTINUED FROM PAGE 59)

Dahlgren system the dampening solution is applied only to the first inking roller. In this way the solution is transferred to the plate before being distributed to the train.

Some complaint, commented an R&EC member, has been made about the cost of alcohol which makes up 25% of the dampening solution. It appears, however, that there is less likelihood of the water getting back into the ink.

Another informal commentator from the floor said that after a six month test it did not appear that letterpress papers lend themselves to use of the system.

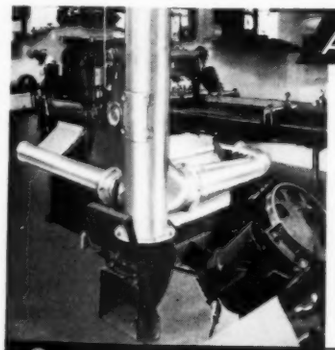
A spokesman for a press manufacturing company stated that presses made by his company which were equipped with the system showed inconclusive results—two out of ten 25 in. by 38 in. outstanding presses are running well.

John Davis, Jr., production manager, Judd & Detwiler, Inc., Washington, D.C., stated the Dahlgren dampening system is used on two 25 in. by 38 in. presses in his plant. Letterpress papers have been run successfully on these presses. He said the pressman is able to maintain better ink-water balance through use of the system.

Thomas E. Brinkman, Cincinnati Lithographing Co., Inc., reported that on a quoted price of $6 thousand installation for a 25 in. by 38 in. press, at 1c per lb. saving in letterpress paper, it would be necessary to run five million sheets to recover the installation cost. ⊕

Rocky Mountain Papers To Meet in Denver

Nine clinics will be held during the Rocky Mountain Mechanical Conference to be held at Brown Palace Hotel, Denver, Oct. 27-29.



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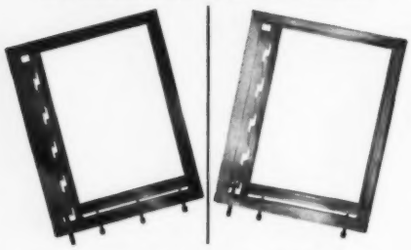

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ANPA Research

(CONTINUED FROM PAGE 62)

Similar results were obtained with synthetics. "Surprisingly enough," he reported, "water base inks did not seriously affect the urethane type of plastic which is supposed to be water sensitive. Limited mileage tests show that the water base inks are at least equivalent to oil inks. At present, the raw materials cost of the ink is approximately 3¢ more per lb. than the regular newspaper printing ink.

For ROP and color comic printing, indications are that the water base color inks are cleaner and brighter. Staining due to oil penetration to the reverse side of the sheet has been completely eliminated.

Yelmgren reported also that change of brightness between the two types of ink (oil and water base) has been measured in the laboratory with a densichron. A halftone printed with black water base ink shows a 15% increase in brightness over an equivalent oil ink. Water base color inks follow a similar pattern.

Mat Molding Techniques

Stanczak also reported on the ANPA Laboratories evaluation of three pieces of equipment—the Sta-Hi Auto Vac, Tri-Q Toaster and Hoe variable speed Monarch II mat roller.

Evaluation of the mat pre-dryers consisted of measurements of: (1) Space depth in open space areas, and (2) depth in halftone and line areas. The effect of these machines on over-all drying time and on maximum mat shrinkage was also investigated.

The speaker said: "In our evaluation, we used the Sta-Hi Master Former as a control. Using the Master Former alone, with base temperature at 320 deg. F. and the chamber at 300 deg. F., the drying time for the 1 in. shrinkage mat used was 4½ min. The vacuum cycle was as follows: Seat the mat at 3 in., preshrink at 0 in. for 2 min., and finish at 3 in. vacuum for the remaining 2½ min. With the Tri-Q Toaster and Sta-Hi Auto Vac, times of 2 min. to 90 sec. were used. This enabled us to reduce the time in the final former to 3½ min. This resulted in a total drying time of 5 to 5½ min. as compared to the 4½ min. with the Sta-Hi Former only.

"The reason for increase in total drying time is due to the fact that the Tri-Q and Auto Vac do not build up sufficient heat in 1½ min. to 2 min. to equal the temperature normally used in the Sta-Hi Master Former.

"Measurement of mats and plates showed that there was no significant difference in depth retention in large nonprinting areas. There was also no significant difference in retention of depth in halftone and line areas.

"Basically these machines offer something which is valuable for high-shrink mat users. Blowers in the machine create enough vacuum to keep mats flat without retarding shrinkage. This results in mats which are easy to handle in trimming and placement in the final former."

Photocomp Interest

(CONTINUED FROM PAGE 63)

resentative witnessed each test, conducted under controlled conditions. Actual production time only was counted. The shop using the technique of hot metal paste-up set the ad in less time than any of the other hot metal shops and in less time than three out of the five plants that set the ad by cold type, Burrell reported.

Test results indicated that each of the photocomposition shops took about the same amount of time to complete the basic functions of mark-up, key boarding and make-up. The same held true for the hot metal shops. Times for such operations depend almost completely on the craftsmen's skill and savings in these areas can only be accomplished by improving working skills, Burrell added.

To Achieve Greatest Savings

Greatest savings can be made by improving the supporting operations. In comparing photocomposition times, greatest variations were not attributed to phototypesetting machines but to procedures and techniques, Burrell said.

He stated that the real signifi-

cance of the test ad results bore out the contention that a good shop will make a good showing, regardless of the type of machinery used. "This was verified by the fact that the plant which set the ad in the least amount of time by photocomp also took the least amount of time among the hot metal shops," Burrell commented.

Test results showed that as far as equipment was concerned a 25% saving in time can be achieved by photocomposition over hot metal composition. Average photocomp time for all papers which set the ad was 8 hrs., 57 min. as against 12 hrs., 30 min. for conventional hot metal. The test was concerned solely with the labor factor and no consideration was given to the cost of equipment in conducting the test, Burrell said.

Donald Newhouse, Portland (Ore.) *Oregonian* publisher, reported on his paper's experiences with use of the Arrow Whiteprinter for cold type proofs.

An autopositive reflex shot of the ad copy is made by feeding into the printing slot and setting the machine for ejection before going through the developing stage, Newhouse stated. The autopositive paper is so insensitive to light that it is developed in open room light.

Advantages of using autopositives include use by the proofroom for corrections before engraving and by the engraver to correlate cuts with original copy, he added.

A No. 12 blue line reproduction paper is used for printing advertisers' proofs from the autopositive. As an indication of overall time taken for proofing, ads are processed several to an autopositive sheet at an average rate of about one ad per five min., with about four to six proofs each, Newhouse concluded. ⊕

Vernon R. Spitaleri, standing, president of Sta-Hi Corp., addresses newspaper production executives in attendance at the Sta-Hi Mat Forming Clinic conducted during the ANPA-RI Production Management Conference in Chicago. Operation and maintenance of the Sta-Hi Master Former were explained during the clinic.

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Efficiency Expansion Chucks are available for either fiber or steel cores up to 12" in diameter, for shafts of 1" to 3 1/2" in diameter and in size graduation of 1/16". Your order is custom machined to a close tolerance so that you get a perfect fit. It won't slip — ever. Unwind, rewind or brake easily. In one operation lever the cam and lock it. Chucks are interchangeable — no rights or lefts. Gives years of service — made of malleable, high strength castings. Surfaces which contact core are all precision machined. Lever applies powerful force to the expansion jaws. Rib jaws bite firmly into core, eliminating core slippage when starting or changing speeds, even under extreme brake tension.

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Investigate the Cooksey System Today

KORTHE ENGINEERING CO.

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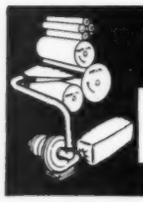
Sales Agents { The Goss Printing Press Co., Chicago / R. Hoe & Co., New York / Wood Newspaper Machinery Co., New York

For More Information Circle 113 on Reader Service Card



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JULY 1961

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WILLIAM L. OSBORN, Eastern Adv. Mgr. & WINSLOW T. REITHER, 310 E. 49th St., New York 17, N. Y. Phone: Plaza 3-8350.

MELBURN O. SIMMONS, Mid-West Advertising Manager, 333 North Michigan Ave., Chicago 1, Ill. Phone: DEarborn 2-6467.

WM. A. AYRES, West Coast Representative, 233 Sansome St., San Francisco 4, Calif. Phone: YUkon 6-2981.

JOHN A. BASSETT, 1709 W. 8th St., Los Angeles 17, Calif. Phone: HUbbard 3-2777.

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Miller SW 21x28 No. 10316 rebuilt
2 Seybold 50" Precision cutters
6/0 Miehle Two Colors and Harris Two Color LTR 73" press from Chicago's largest color plant. ATF Chief 29
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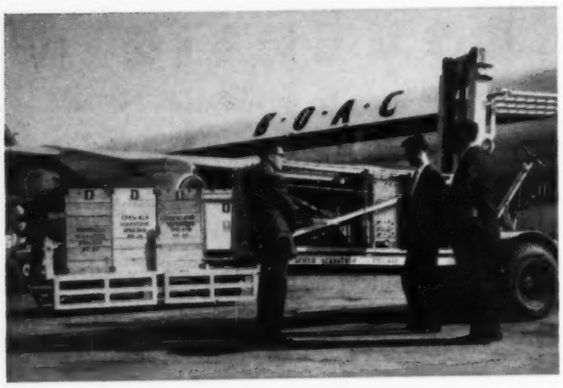
Western Sales and Service
3156 Wilshire Blvd., Los Angeles 5, Calif. Phone: DUnkirk 8-9931

For More Information Circle 210 on Reader Service Card



Transatlantic Shipment by Jet – In the heaviest (2½ T.) transatlantic commercial jet shipment ever made, a Crosfield Electronics Scanatron system was delivered from England to a Chicago printing plant. This is the first Crosfield installation in the U. S. The Scanatron automatically provides color corrected, continuous tone positives.

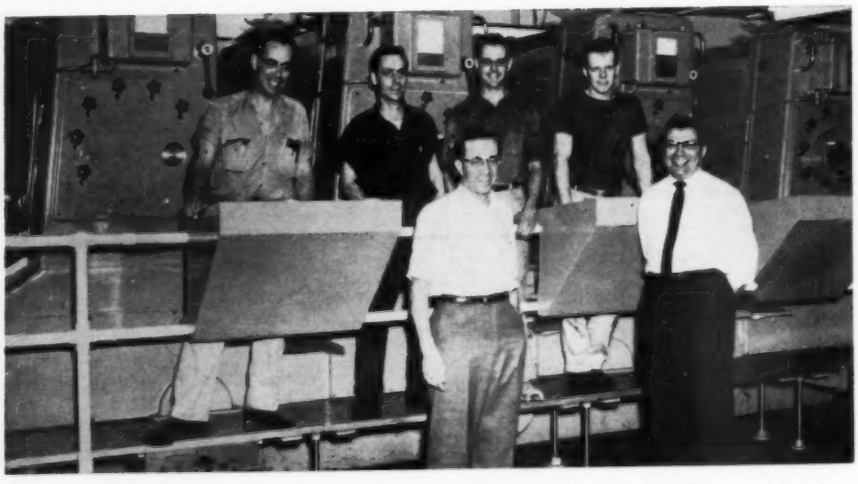
Web Offset for Indiana Weekly–Taking part in contract signing for a new two unit Vanguard web offset press for *The Graphic*, a 24 page tabloid weekly serving the Richmond, Ind., area are, (left to right): Victor Jose, editor and publisher; Richard C. Barnard, printing supervisor and Eugene Harter, representative of Cottrell Company.

GRAPHIC VIEWS

of the Printing Industry

nuArc Adds Factory Space–nuArc Company, Inc., has begun work on its Chicago factory to create 10,000 sq. ft. of extra space. According to the company, the extra space is necessary to accommodate increased manufacturing requirements for its photomechanical equipment.

NYEPA Officials Receive Congratulations–New Jersey Governor Robert B. Meyner congratulates outgoing chairman of the New York Employing Printers Assn., Donald B. Thrush (left) and incoming chairman Samuel F. Chernoble (right) at NYEPA's annual meeting attended by over 800 members.



Miller-M.A.N. Color Press at Western–Western Printing and Lithographing Co. recently installed a Miller-M.A.N. 30 in. by 42 in. four color offset press in its Poughkeepsie, N.Y., plant. The new press will serve a dual purpose–as a production press for short runs and as a proof press. Western's production team shown by the new press are (left to right) front: Joseph Gajdos, offset pressroom foreman; Donald Gemmel, superintendent of lithography; rear: Herbert Brader, assist. foreman; and press crew, Leonard Morano, Bertram Brandt, Edwin Hewlett.

PIA Wins Chamber of Commerce Award–Arthur H. Motley (left), U. S. Chamber of Commerce president, presents a Recognition Award to Francis N. Ehrenberg, president, Printing Industry of America. The award was made for PIA's accomplishments in promoting good business management.

HAMMOND

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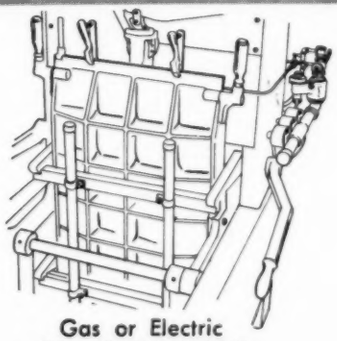
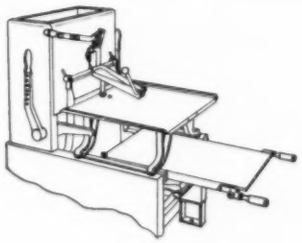


Gas or Electric
BED PRE-HEATERS



EasyKaster
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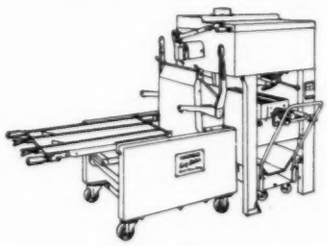

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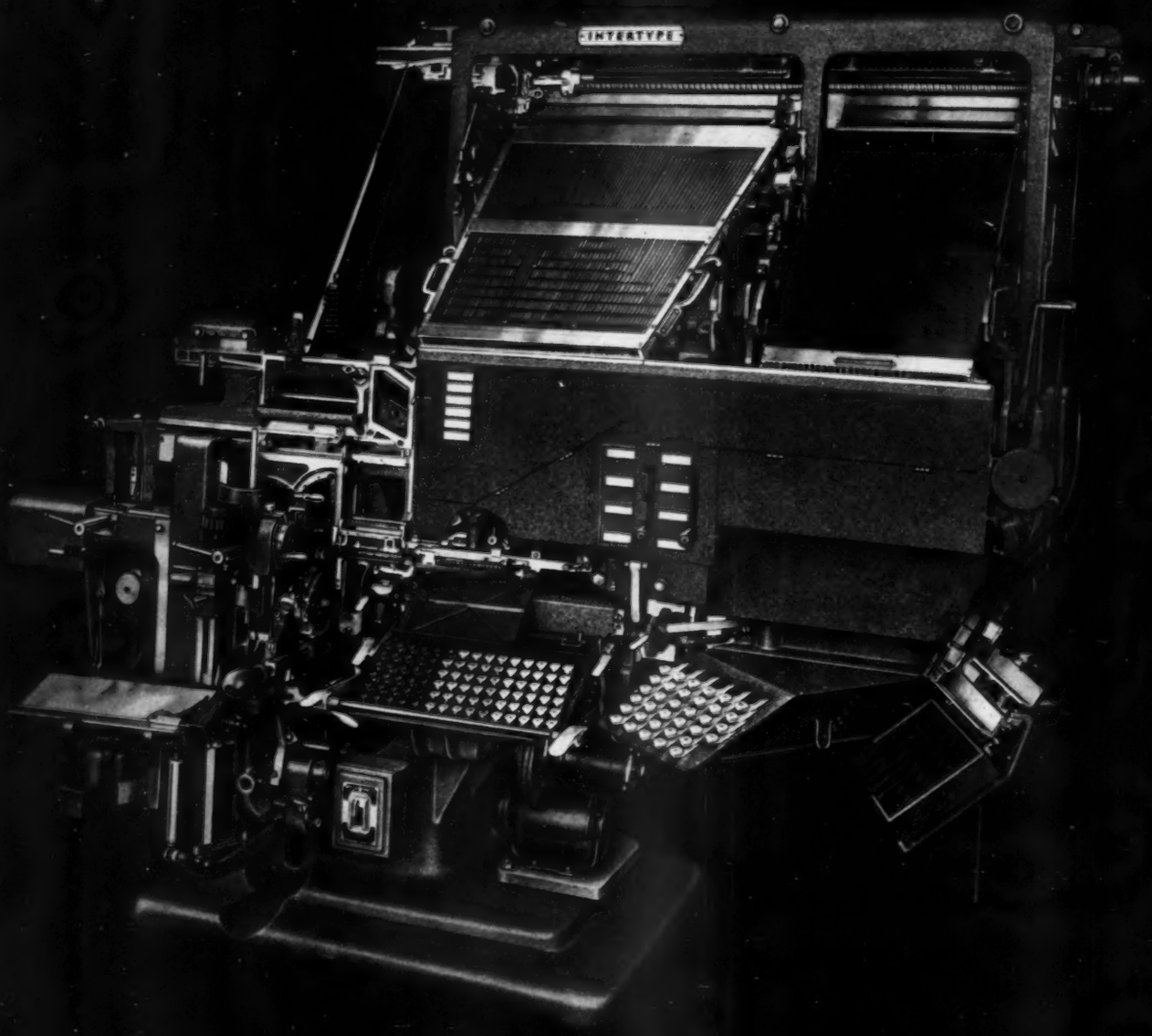
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